

STANDARD DEVELOPMENT BRANCH M.E.



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# REGULATION 309

Under the Environmental Protection Act

(As amended by O.Reg. 175/83; O.Reg. 574/84;  
O.Reg. 322/85)

June 17, 1985

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Ministry  
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Environment

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## REGULATION 309

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(As amended by O.Reg. 175/83; O.Reg. 574/84;  
O.Reg. 322/85)

### OFFICE CONSOLIDATION

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THIS EDITION IS PREPARED FOR PURPOSES OF  
CONVENIENCE ONLY, FOR ACCURATE REFERENCE RECOURSE  
SHOULD BE HAD TO THE OFFICIAL VOLUMES.

NOTE: The amendments to this Regulation by O.Reg. 322/85  
come into force on September 17, 1985.



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remade by section 3 of Ontario Regulation 333/84, is revoked and the following substituted therefor:

7. Sections 2 to 5 and 8 do not apply to a part-time master to whom section 1a applies. O. Reg. 463/85, s. 1.

2. The said Regulation, as amended by sections 1 to 3 of Ontario Regulation 333/84 and section 1 of Ontario Regulation 229/85, is further amended by adding thereto the following section:

8.—(1) A master is entitled to claim and be reimbursed by the Crown for reasonable expenses actually incurred by him and approved by the senior master that are incidental to the fit and proper execution of the master's office, including,

- (a) necessary purchase and maintenance of judicial attire and luggage for transporting documents and judicial attire;
- (b) purchase of books and other publications related to judicial duties, other than books and publications that are available at the master's regular location; and
- (c) membership in recognized associations contributing to professional development.

(2) Subsection (1) does not apply to mileage expenses, meal expenses, accommodation expenses, conference, meeting or seminar expenses, relocation expenses or any other expense for which compensation is provided by the Crown apart from this Regulation.

(3) A master is not entitled to claim or to be reimbursed under subsection (1) for more than \$1,000 in respect of the twelve-month period commencing on the 1st day of April in each year.

(4) Where a master's expenses in a period mentioned in subsection (3) exceed the amount that the master is entitled to claim in respect of the period, the master is entitled, subject to subsection (3), to claim the excess as an expense in respect of the following twelve-month period.

(5) Where a master is not in office during all of a period in respect of which the master is entitled to claim and be reimbursed for expenses under subsection (1), the maximum amount under subsection (3) shall be reduced by \$83.33 for each full month that the master is not in office during the period.

(6) A master is not entitled to claim or to be reimbursed under subsection (1) for an expense incurred before the 1st day of April, 1985.

(7) Property for which a master is reimbursed under subsection (1) is the property of the Crown in right of Ontario and the master or the personal representative

of the master shall deliver the property to the Crown when the master ceases to hold office, if the property is in serviceable condition at that time. O. Reg. 463/85, s. 2.

(7418)

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## ENVIRONMENTAL PROTECTION ACT

O. Reg. 464/85.

General—Waste Management.

Made—September 11th, 1985.

Filed—September 13th, 1985.

REGULATION TO AMEND  
REGULATION 309 OF  
REVISED REGULATIONS OF  
ONTARIO, 1980  
MADE UNDER THE  
ENVIRONMENTAL PROTECTION  
ACT

1.—(1) Paragraph 2 of section 1 of Regulation 309 of Revised Regulations of Ontario, 1980, as made by section 1 of Ontario Regulation 322/85, is amended by striking out "Schedule 2E" in the fourth line and inserting in lieu thereof "Part E of Schedule 2".

(2) Section 1 of the said Regulation is amended by adding thereto the following paragraph:

19a. "existing hospital incinerator" means an incinerator put into operation before the 31st day of December, 1985 owned by a hospital within the meaning of the *Public Hospitals Act* at which pathological waste but no hauled liquid industrial waste or other hazardous waste is incinerated;

(3) Paragraph 28 of the said section 1 is amended by striking out "Schedule 2E" in the fourth line and inserting in lieu thereof "Part E of Schedule 2".

(4) Subparagraph iv of paragraph 38 of the said section 1 is amended by striking out "that" in the second line and inserting in lieu thereof "than".

(5) Paragraphs 44 and 62 of the said section 1 are revoked and the following substituted therefor:

44. "on-site incinerator" means an incinerator located at a site used principally for functions

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other than waste management in which only waste generated on that site is incinerated;

62. "waste-derived fuel" means waste having a quality as fuel not worse than commercially available low grade fuel and that is located at or destined for a waste-derived fuel site where it will be wholly utilized as a fuel or fuel supplement in a combustion unit;

(6) Paragraph 63 of the said section 1 is amended by adding at the end thereof "generated off the site".

2. Section 4 of the said Regulation is amended by adding thereto the following paragraphs:

12. Existing hospital incinerators.

13. Waste-derived fuel sites.

14. Dust suppression sites.

15. On-site incinerators at the site of a veterinary hospital.

16. Incinerators at the site of a crematorium within the meaning of the *Cemeteries Act*.

3.—(1) Paragraph 1 and paragraph 4, as made by subsection 4 (1) of Ontario Regulation 322/85, of subsection 5 (1) of the said Regulation are revoked and the following substituted therefor:

1. On-site incinerators at the site of a veterinary hospital.

4. Incinerators at the site of a crematorium within the meaning of the *Cemeteries Act*.

(2) Section 5 of the said Regulation, as amended by section 4 of Ontario Regulation 322/85, is further amended by adding thereto the following subsection:

(3) Waste-derived fuel sites are exempt from the operation of section 27 of the Act. O. Reg. 464/85, s. 3 (2).

4. Subsection 14 (2) of the said Regulation, as made by section 1 of Ontario Regulation 574/84, is revoked.

5. Clause 15 (15) (b) of the said Regulation, as made by section 9 of Ontario

Regulation 322/85, is amended by adding at the end thereof "but does not include such waste if it is produced in any month in an amount less than twenty-five kilograms or accumulated in an amount less than twenty-five kilograms".

6. Subsection 16 (1) of the said Regulation, as made by section 9 of Ontario Regulation 322/85, is revoked and the following substituted therefor:

(1) No generator shall permit subject waste to pass from his control or to leave the waste generation facility except,

(a) by transfer of the subject waste to a waste transportation system operating under a certificate of approval or provisional certificate of approval and where the generator has completed a manifest in respect of the waste in accordance with this Regulation; or

(b) by direct discharge to a sewage works subject to the *Ontario Water Resources Act* or established before the 3rd day of August, 1957 or to a sewage system as defined in Part VII of the Act. O. Reg. 464/85, s. 6.

7. Subsection 19 (2) of the said Regulation, as made by section 9 of Ontario Regulation 322/85, is amended by striking out "of provisional" in the sixth line and inserting in lieu thereof "or provisional".

8. The said Regulation is amended by adding thereto the following sections:

#### ON-SITE INCINERATORS

25.—(1) On-site incinerators are exempt from the operation of section 27 of the Act on condition that no hazardous waste or liquid industrial waste is incinerated therein.

(2) On-site incinerators are exempt from the requirement of being the subject-matter of a hearing under subsection 30 (1) of the Act. O. Reg. 464/85, s. 8, *part*.

#### EXISTING HOSPITAL INCINERATORS

26.—(1) Existing hospital incinerators are exempt from the operation of section 27 of the Act in respect of their establishment, use and operation.

(2) The exemption granted in subsection (1) in respect of any incinerator within the class is conditional on a submission being made, in respect of the incinerator, to the Director, before the end of March in

each year, of a report on the preceding year ending with the 31st day of December setting out a summary of the source, nature and quantity of waste incinerated therein and a professional assessment of the extent of compliance with Regulation 308 of Revised Regulations of Ontario, 1980 in the operation of the incinerator. O. Reg. 464/85, s. 8, *part*.

9.—(1) The headings "Hazardous Waste Number" to the first column of Parts A and B of Schedule 2, of Schedule 3 and of Schedule 4 to the said Regulation, as made by section 11 of Ontario Regulation 322/85, are revoked and "Reference Number" substituted in each instance.

(2) The said Schedule 2 is amended by adding thereto the following Part:

PART E

EXEMPT ACUTE HAZARDOUS WASTE CHEMICALS  
EXEMPT HAZARDOUS WASTE CHEMICALS

(There are no wastes currently listed  
in this Part)

(3) Schedule 2E to the said Regulation, as made by section 11 of Ontario Regulation 322/85, is revoked.

10.—(1) Where an exemption from the requirement of having a certificate of

approval or provisional certificate of approval was in effect before this Regulation comes into force that, as a result of the operation of Ontario Regulation 322/85 or this Regulation, would cease, the exemption shall apply,

(a) until the 17th day of September, 1986; or

(b) where an application for a certificate of approval is made before the 17th day of September, 1986, until a final decision to issue or refuse to issue the certificate is made.

(2) For the purpose of Regulation 309 of Revised Regulations of Ontario, 1980, every waste management system or waste disposal site operating under the exemption granted under subsection (1) that transfers, transports, treats, processes or receives subject waste, shall be considered to be operating under a certificate of approval or provisional certificate of approval.

11. This Regulation comes into force on the 17th day of September, 1985.

(7419)

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REGULATION 309  
under the Environmental Protection Act  
(As amended by O.Reg. 175/83; O.Reg. 574/84;  
O.Reg. 322/85)

General - Waste Management

1. In this Regulation,

1. "access road" means a road that leads from a public road to a waste disposal site;
2. "acute hazardous waste chemical" means a commercial waste chemical having a generic name listed in Part A of Schedule 2 but does not include a waste listed in Schedule 2E;
3. "agricultural waste" means waste, other than sewage, resulting from farm operations, including animal husbandry and where a farm operation is carried on in respect of food packing, food preserving, animal slaughtering or meat packing, includes the waste from such operations;
4. "asbestos waste" means solid or liquid waste that results from the removal of asbestos-containing construction or insulation materials or the manufacture of asbestos-containing products and contains asbestos in more than a trivial amount or proportion;
5. "carrier" means the operator of a waste transportation system;
6. "cell", in respect of a landfilling site, means a deposit of waste that has been sealed by cover material so that no waste deposited in the cell is exposed to the atmosphere;
7. "commercial waste" includes asbestos waste;
8. "commercial waste chemical" means a waste that is or contains a commercial chemical product or manufacturing chemical intermediate of a specified generic name and includes,
  - i. an off-specification commercial chemical product or manufacturing chemical intermediate which, if it met specifications, would have the specified generic name,
  - ii. residues or contaminated material from the clean-up of a spill of a commercial chemical product or manufacturing chemical intermediate of the specified generic name or of an off-specification commercial chemical



product or manufacturing chemical intermediate which, if it met specifications, would have the specified generic name, or

- iii. an empty container or the liner from an empty container that contained a commercial chemical product or manufacturing chemical intermediate of the specified generic name, or an off-specification commercial chemical product or manufacturing chemical intermediate which, if it met specifications, would have the specified generic name, or residues or contaminated materials from the clean-up of a spill of any of them, unless the empty container or the liner from the empty container has been triple rinsed,

but, except as specified in subparagraph i, ii or iii, does not include a waste stream or waste material contaminated with material of the specified generic name;

- 9. "composting" means the treatment of waste by aerobic decomposition of organic matter by bacterial action for the production of stabilized humus;
- 10. "corrosive waste" means a waste that,
  - i. is aqueous and has a pH less than or equal to two or greater than or equal to 12.5 as determined by a pH meter, or
  - ii. is a liquid and corrodes steel (SAE 1020) at a rate greater than 6.35 millimetres per year at a test temperature of 55° Celsius using test NACE TM-01-69 or an equivalent test approved by the Director;
- 11. "cover material" means soil or other material approved for use in sealing cells in landfilling;
- 12. "dead animal" means an animal that dies naturally or from disease or by reason of accident and includes parts thereof;
- 13. "derelict motor vehicle" means a motor vehicle that,
  - i. is inoperable, and
  - ii. has no market value as a means of transportation, or, has a market value as a means of transportation that is less than the cost of repairs required to put it into operable condition;
- 14. "Director" means the Director of the Waste Management Branch of the Ministry and includes an alternate named by him;

15. "domestic waste" includes asbestos waste;
16. "dump" means a waste disposal site where waste is deposited without cover material being applied at regular intervals;
17. "dust suppressant" means a waste used for dust suppression in accordance with a certificate of approval or provisional certificate of approval for a dust suppression waste management system;
18. "dust suppression site" means a waste disposal site where dust suppressant is deposited;
19. "empty container" means a container from which all wastes and other materials have been removed using the removal practices such as pumping or pouring commonly used for the specific materials and that contains less than 2.5 centimetres of material on the bottom of the container;
20. "fly-ash" means particulate matter removed from combustion flue gases;
21. "generator" means the operator of a waste generation facility;
22. "grinding" means the treatment of waste by uniformly reducing the waste to particles of controlled maximum size;
23. "hailed liquid and hazardous waste collection system" means a waste management system or any part thereof for the collection, handling, transportation, storage or processing of hailed liquid industrial waste or hazardous waste but does not include the disposal thereof;
24. "hailed liquid industrial waste" means liquid industrial waste transported in a tank or other container for treatment or disposal;
25. "hailed sewage" means waste removed from,
  - i. a cesspool,
  - ii. a septic tank system,
  - iii. a privy vault or privy pit,
  - iv. a chemical toilet,
  - v. a portable toilet, or
  - vi. a sewage holding tank;



26. "hazardous industrial waste" means a generic or specific waste listed in Schedule 1 but does not include a waste listed in Schedule 1E;
27. "hazardous waste" means a waste that is a,
- i. hazardous industrial waste,
  - ii. acute hazardous waste chemical,
  - iii. hazardous waste chemical,
  - iv. severely toxic waste,
  - v. ignitable waste,
  - vi. corrosive waste,
  - vii. reactive waste,
  - viii. radioactive waste, except radioisotope wastes disposed of in a landfilling site in accordance with the written instructions of the Atomic Energy Control Board,
  - ix. pathological waste,
  - x. leachate toxic waste, or
  - xi. PCB waste as defined in Ontario Regulation 11/82,

and includes a mixture of acute hazardous waste chemical, hazardous waste chemical, hazardous industrial waste, pathological waste, radioactive waste or severely toxic waste and any other waste or material, but does not include,

- xii. hauled sewage,
- xiii. waste from the operation of a sewage works subject to the Ontario Water Resources Act where the works,
  - A. is owned by a municipality,
  - B. is owned by the Crown subject to an agreement with the municipality under the Ontario Water Resources Act, or
  - C. receives only waste similar in character to the domestic sewage from a household,
- xiv. domestic waste,
- xv. ash resulting from the incineration of domestic waste or other waste of a similar nature,

- xvi. waste that is a hazardous industrial waste, hazardous waste chemical, ignitable waste, corrosive waste, leachate toxic waste or reactive waste and that is produced in any month in an amount less than five kilograms or otherwise accumulated in an amount less than five kilograms,
  - xvii. waste that is an acute hazardous waste chemical and that is produced in any month in an amount less than one kilogram or otherwise accumulated in an amount less than one kilogram,
  - xviii. an empty container or the liner from an empty container that contained hazardous industrial waste, hazardous waste chemical, ignitable waste, corrosive waste, leachate toxic waste or reactive waste,
  - xix. an empty container of less than twenty litres capacity or one or more liners weighing, in total, less than ten kilograms from empty containers, that contained acute hazardous waste chemical,
  - xx. the residues or contaminated materials from the clean-up of a spill of less than five kilograms of waste that is a hazardous industrial waste, hazardous waste chemical, ignitable waste, corrosive waste, leachate toxic waste or reactive waste, or
  - xxi. the residues or contaminated materials from the clean-up of a spill of less than one kilogram of waste that is an acute hazardous waste chemical;
28. "hazardous waste chemical" means a commercial waste chemical having a generic name listed in Part B of Schedule 2, but does not include a waste listed in Schedule 2E;
29. "ignitable waste" means a waste that,
- i. is a liquid, other than an aqueous solution containing less than 24 per cent alcohol by volume and has a flash point less than 61° Celsius, as determined by the Tag Closed Cup Tester (ASTM D-56-79), the Setaflash Closed Cup Tester (ASTM D-3243-77 or ASTM D-3278-78), the Pensky-Martens Closed Cup Tester (ASTM D-93-79), or as determined by an equivalent test method approved by the Director,

- ii. is a solid and is capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a danger,
  - iii. is an ignitable compressed gas (Class 2, Division 1) as defined in the regulations under the Transportation of Dangerous Goods Act (Canada), or
  - iv. is an oxidizing substance (Class 5, Divisions 1 and 2) as defined in the regulations under the Transportation of Dangerous Goods Act (Canada);
30. "incinerator ash" means the ash residue, other than fly-ash, resulting from incineration where the waste is reduced to ashes containing by weight less than 10 per cent of combustible materials;
31. "incinerator waste" means the residue from incineration, other than incinerator ash and fly-ash;
32. "individual collection system" means the collection of his own domestic wastes by a householder and the transportation of such wastes to a waste disposal site by the householder;
33. "industrial waste" means waste from,
- i. an enterprise or activity involving warehousing, storage or industrial, manufacturing or commercial processes or operations,
  - ii. research or an experimental enterprise or activity,
  - iii. an enterprise or activity to which subparagraph i would apply if the enterprise or activity were carried on for profit,
  - iv. clinics that provide medical diagnosis or treatment, or
  - v. schools, laboratories or hospitals;
34. "inert fill" means earth or rock fill or waste of a similar nature that contains no putrescible materials or soluble or decomposable chemical substances;
35. "intact manifest" means a manifest as provided by the Ministry, with all six parts intact;

36. "landfilling" means the disposal of waste by deposit, under controlled conditions, on land or on land covered by water, and includes compaction of the waste into a cell and covering the waste with cover materials at regular intervals;
37. "leachate toxic waste" means a waste producing leachate containing any of the contaminants listed in Schedule 4 at a concentration in excess of one hundred times that specified in the Schedule using the Leachate Extraction Procedure or an equivalent test method approved by the Director;
38. "liquid industrial waste" means waste that is both liquid waste and industrial waste but does not include,
- i. hauled sewage,
  - ii. waste from the operation of a sewage works described in subparagraph xiii of paragraph 27,
  - iii. waste from the operation of a water works subject to the Ontario Water Resources Act,
  - iv. waste that is produced in any month in an amount less than twenty-five litres or otherwise accumulated in an amount less than twenty-five litres,
  - v. waste directly discharged by a generator from a waste generation facility into a sewage works subject to the Ontario Water Resources Act or established before the 3rd day of April, 1957 or into a sewage system, as defined in Part VII of the Act,
  - vi. waste that results directly from food processing and preparation operations, including food packing, food preserving, wine making, cheese making and restaurants,
  - vii. drilling fluids and produced waters associated with the exploration, development or production of crude oil or natural gas,
  - viii. processed organic waste, or
  - ix. asbestos waste;
39. "manifest" means a numbered document in Form 1 that was obtained from the Ministry;
40. "marine craft waste disposal system" means a waste disposal system operated by a person or a municipality for the receiving of waste from marine craft for deposit in holding tanks;

41. "municipal waste management system" means a waste management system, or any part thereof, of which a municipality is the owner;
42. "non-hazardous solid industrial waste" means industrial waste that is not liquid industrial waste and is not hazardous waste and includes asbestos waste;
43. "on-site garbage grinder" means a grinder,
  - i. used for the treatment of waste that is subsequently discharged as sewage, and
  - ii. located in a building or structure used principally for functions other than waste management;
44. "on-site incinerator" means an incinerator that is located in a building or structure used principally for functions other than waste management;
45. "on-site road" means a road for the movement of vehicles and equipment within a waste disposal site;
46. "organic soil conditioning" means the incorporation of processed organic waste in the soil to improve its characteristics for crop or ground cover growth;
47. "packing and baling" means the treatment of waste by its compression into blocks or bales and binding or sheathing the blocks with wire, metal, plastic or other material;
48. "pathological waste" means,
  - i. any part of the human body, including tissues and bodily fluids, but excluding fluids, extracted teeth, hair, nail clippings and the like, that are not infectious,
  - ii. any part of the carcass of an animal infected with a communicable disease or suspected by a licensed veterinary practitioner to be infected with a communicable disease, or
  - iii. non-anatomical waste infected with communicable disease;
49. "private waste management system" means a waste management system, or any part thereof, of which a person other than a municipality is the owner;
50. "processed organic waste" means waste that is predominantly organic in composition and has been treated by aerobic or anaerobic digestion, or other means of stabilization, and includes sewage residue

from sewage works that are subject to the provisions of the Ontario Water Resources Act;

51. "reactive waste" means a waste that,
- i. is normally unstable and readily undergoes violent change without detonating,
  - ii. reacts violently with water,
  - iii. forms potentially explosive mixtures with water,
  - iv. when mixed with water, generates toxic gases, vapours or fumes in a quantity sufficient to present danger to human health or the environment,
  - v. is a cyanide or sulphide bearing waste which, when exposed to pH conditions between two and 12.5, can generate toxic gases, vapours or fumes in a quantity sufficient to present danger to human health or the environment,
  - vi. is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement,
  - vii. is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure, or
  - viii. is an explosive (Class 1) as defined in the regulations under the Transportation of Dangerous Goods Act (Canada);
52. "receiver" means the operator of any facility to which waste is transferred by a carrier;
53. "recyclable material" means waste transferred by a generator and destined for a site,
- i. where it will be wholly utilized, in an ongoing agricultural, commercial, manufacturing or industrial process or operation used principally for functions other than waste management and that does not involve combustion or land application of the waste,
  - ii. where it will be promptly packaged for retail sale, or
  - iii. where it will be offered for retail sale to meet a realistic market demand,

but does not include hazardous waste or liquid industrial waste unless the transportation from generator to site is direct.

- 54. "scavenging" means the uncontrolled removal of reusable material from waste at a waste disposal site;
- 55. "severely toxic waste" means a waste that contains a contaminant listed in Schedule 3 at a concentration greater than one part per million;
- 56. "site" means one property and includes nearby properties owned or leased by the same person where passage from one property to another involves crossing, but not travelling along, a public highway;
- 57. "subject waste" means,

- i. liquid industrial waste, and
- ii. hazardous waste,

but does not include waste from the servicing of motor vehicles at a retail motor vehicle service station or service facility that has a written agreement for the collection and management of such waste with a waste management system approved under Part V for the purposes and does not include waste from,

- iii. a nursing home under the Nursing Homes Act,
- iv. a home under the Homes for the Aged and Rest Homes Act,
- v. a home for special care under the Homes for Special Care Act,
- vi. the professional office of a member of the Royal College of Dental Surgeons of Ontario, or
- vii. the professional office of a member of the College of Physicians and Surgeons of Ontario;

- 58. "transfer" means physical transfer of possession;
- 59. "transfer station" means a waste disposal site used for the purpose of transferring waste from one vehicle to another for transportation to another waste disposal site;
- 60. "waste generation facility" means those facilities, equipment and operations that are involved in the production, collection, handling or storage of subject waste at a site;



61. "waste transportation system" means those facilities, equipment and operations that are involved in transporting subject waste beyond the boundaries of a site or from site to site;
62. "waste-derived fuel" means waste transferred by a generator and destined for a waste-derived fuel site where it will be wholly utilized as a fuel or fuel supplement in a combustion unit;
63. "waste-derived fuel site" means a waste disposal site where waste-derived fuel is wholly utilized as a fuel or fuel supplement in a combustion unit used principally for functions other than waste management and, for hazardous waste or liquid industrial waste, the site may include blending or bulking facilities but may not include facilities for treatment or processing of waste-derived fuel.  
O.Reg. 322/85, s.1.

#### DESIGNATION AND EXEMPTION OF WASTES

2. The following are designated wastes:
  1. Dust suppressant.
  2. Inert fill.
  3. Processed organic waste.
  4. Recyclable material.
  5. Rock fill or mill tailings from a mine.
  6. Waste-derived fuel.
  7. Hazardous waste.
  8. Hauled liquid industrial waste.  
O.Reg. 322/85, s.2.
3. The following wastes are exempted from Part V of the Act and this Regulation:
  1. Agricultural wastes.
  2. Condemned animals or parts thereof at a plant licensed under the Meat Inspection Act (Ontario) or an establishment operating under the Meat Inspection Act (Canada).
  3. Dead animals to which the Dead Animal Disposal Act applies.



4. Hauled sewage.
5. Inert fill.
6. Rock fill or mill tailings from a mine.  
R.R.O. 1980, Reg. 309, s.3.
7. Recyclable material. O.Reg. 322/85, s.3.

CLASSIFICATION AND EXEMPTION  
OF WASTE DISPOSAL SITES

4. Waste disposal sites are classified as follows:

1. Composting sites.
2. Derelict motor vehicle sites.
3. Dumps.
4. Grinding sites.
5. Incineration sites.
6. Landfilling sites.
7. On-site incinerators.
8. On-site garbage grinders.
9. Organic soil conditioning sites.
10. Packing and baling sites.
11. Transfer stations.  
R.R.O. 1980, Reg. 309, s.4.

5.(1) The following waste disposal sites are exempted from Part V of the Act and this Regulation:

1. On-site incinerators.
2. On-site garbage grinders.
3. Derelict motor vehicle sites.  
R.R.O. 1980, Reg. 309, s.5.
4. Waste-derived fuel sites. O.Reg. 322/85 ss.4(1).

(2) Dust suppression sites designated in a certificate of approval or provisional certificate of approval for a dust suppression waste management system and established and operated in accordance therewith are exempt from the requirement to have a

waste disposal site certificate of approval or provisional certificate of approval. O.Reg. 322/85, ss.4(2).

CLASSIFICATION AND EXEMPTION  
OF WASTE MANAGEMENT SYSTEMS

6. Waste management systems are classified as follows:

1. Municipal waste management systems.
2. Private waste management systems.
3. Individual collection systems.
4. Hauled liquid and hazardous waste collection systems.
5. Marine craft waste disposal systems.
6. Organic waste management systems.  
R.R.O. 1980, Reg. 309, s.6.
7. Waste generation facilities. O.Reg. 322/85 s.5.
8. Waste transportation systems. O.Reg. 322/85 s.5.

7(1) The following waste management systems are exempted from Part V of the Act and this Regulation:

1. Individual collection systems.
2. Marine craft waste disposal systems.  
R.R.O. 1980, Reg. 309, s.7.

(2) Waste generation facilities are exempt from the requirement to have a waste management system certificate of approval in respect of the production, collection, handling and temporary storage of subject waste. O.Reg. 322/85 s.6.

7a. The standards, procedures and requirements set out in this Regulation do not apply to the extent that terms and conditions set out in a certificate of approval or a provisional certificate of approval issued under section 38 of the Act impose different standards, procedures or requirements. O.Reg. 322/85, s.7.

STANDARDS FOR WASTE DISPOSAL SITES

8. The following are prescribed as standards for the location, maintenance and operation of a land-filling site:

1. Access roads and on-site roads shall be provided so that vehicles hauling waste to and on the site may travel readily on any day under all normal weather conditions.
2. Access to the site shall be limited to such times as an attendant is on duty and the site shall be restricted to use by persons authorized to deposit waste in the fill area.
3. Drainage passing over or through the site shall not adversely affect adjoining property and natural drainage shall not be obstructed.
4. Drainage that may cause pollution shall not, without adequate treatment, be discharged into watercourses.
5. Waste shall be placed sufficiently above or isolated from the maximum water table at the site in such manner that impairment of groundwater in aquifers is prevented and sufficiently distant from sources of potable water supplies so as to prevent contamination of the water, unless adequate provision is made for the collection and treatment of leachate.
6. Where necessary to isolate a landfilling site and effectively prevent the egress of contaminants, adequate measures to prevent water pollution shall be taken by the construction of berms and dykes of low permeability.
7. Where there is a possibility of water pollution resulting from the operation of a landfilling site, samples shall be taken and tests made by the owner of the site to measure the extent of egress of contaminants and, if necessary, measures shall be taken for the collection and treatment of contaminants and for the prevention of water pollution.
8. The site shall be located a reasonable distance from any cemetery.
9. Adequate and proper equipment shall be provided for the compaction of waste into cells and the covering of the cells with cover material.
10. Where climatic conditions may prevent the use of the site at all times, provisions shall be made for another waste disposal site which can be used during such periods.

11. Where required for accurate determination of input of all wastes by weight, scales shall be provided at the site or shall be readily available for use.
12. All waste disposal operations at the site shall be adequately and continually supervised.
13. Waste shall be deposited in an orderly manner in the fill area, compacted adequately and covered by cover material by a proper landfilling operation.
14. Procedures shall be established for the control of rodents or other animals and insects at the site.
15. Procedures shall be established, signs posted, and safeguards maintained for the prevention of accidents at the site.
16. The waste disposal area shall be enclosed to prevent entry by unauthorized persons and access to the property shall be by roadway closed by a gate capable of being locked.
17. A green belt or neutral zone shall be provided around the site and the site shall be adequately screened from public view.
18. Whenever any part of a fill area has reached its limit of fill, a final cover of cover material shall be placed on the completed fill and such cover shall be inspected at regular intervals over the next ensuing period of two years and where necessary action shall be taken to maintain the integrity and continuity of the cover materials.
19. Scavenging shall not be permitted.  
R.R.O. 1980, Reg. 309, s.8.

9. The following are prescribed as standards for the location, maintenance and operation of an incineration site:

1. The location of the incineration site shall be selected so as to reduce the effects of nuisances, such as dust, noise, and traffic.
2. Incinerator waste shall be disposed of at a landfilling site.
3. The incinerators shall be located,
  - i. so that it is accessible for the transportation of wastes thereto without nuisance,
  - ii. taking into account meteorological considerations to minimize environmental effects, and

- iii. so that the services and utilities required for the operation of the incinerator are available, including facilities for the disposal of residue and of quenching and scrubbing water.
- 4. The design and capacity of the incinerator shall be in accordance with accepted engineering practices and of a type and size adequate to efficiently process the quantities of waste that may be expected, so that a minimum volume of residue is obtained, the putrescible materials remaining as residue are reduced to a minimum and a minimum of air pollution results.
- 5. The following equipment shall be provided as necessary for particular applications:
  - i. Scales for the accurate determination of the input of all wastes by weight.
  - ii. A storage pit or other storage facilities.
  - iii. A crane or other means of removing waste from the pit or other storage facilities.
  - iv. Means of controlling dusts and odours.
  - v. Such instruments as may be necessary for the efficient operation of an incinerator.
- 6. The incineration site shall include an unloading area properly enclosed and of sufficient size for the intended operation.
- 7. Access roads shall be provided for vehicles hauling waste to the incineration site.
- 8. On-site fire protection shall be provided and, where possible, arrangements shall be made with a fire department or municipality for adequate fire fighting services in case of an emergency.
- 9. Scavenging shall not be permitted.  
R.R.O. 1980, Reg. 309, s.9.
- 10. The following are prescribed as standards for the location, maintenance and operation of a dump:
  - 1. The fill area shall not be subject to flooding and shall be so located that no direct drainage leads to a watercourse.
  - 2. The site shall be at least one-quarter of a mile from the nearest dwelling.
  - 3. The site shall be at least two hundred yards from the nearest public road.

4. The site shall be at least 100 feet from any watercourse, lake or pond.
5. The site shall not be on land covered by water.
6. Signs shall be posted stating requirements for the operation of the dump, including measures for the control of vermin and insect infestation.
7. The site shall be so located and operated as to reduce to a minimum the hazards resulting from fire.
8. The operator of a dump shall apply such cover material at such intervals as is necessary to prevent harm or material discomfort to any person.
9. Scavenging shall not be permitted.  
R.R.O. 1980, Reg. 309, s.10.

11.-(1) Subject to subsection (2), no dump shall be established or operated in a city, borough, town, separated town, township, village or police village in any county, regional municipality or the Provisional County of Haliburton.

(2) A dump may be established in the following parts of Ontario:

1. The townships of Albemarle, Eastnor, Lindsay and St. Edmunds, in the County of Bruce.
2. The townships of Barrie, Bedford, Clarendon and Miller, Howe Island, Kennebec, Olden, and Palmerston and North and South Canonto, in the County of Frontenac.
3. The townships of Bangor, Wicklow and McClure, Carlow, Dungannon, Elzevir and Grimsthorpe, Herschel, Limerick, Madoc, Marmora and Lake, Mayo, Monteagle, Tudor and Cashel, and Wollaston, in the County of Hastings.
4. The townships of Dalhousie and North Sherbrooke, Darling, Lavant, North Burgess, and South Sherbrooke, in the County of Lanark.
5. The townships of Asphodel, Belmont and Methuen, Chandos, Ennismore, Galway and Cavendish, and Harvey, in the County of Peterborough.
6. The townships of Bagot and Blithfield, Brougham, Brudenell and Lyndoch, Griffith and Matawatchan, Head, Clara, and Maria, North Algona, Radcliffe, Raglan, Sebastopol, and South Algona, in the County of Renfrew.
7. The townships of Carden, Dalton, and Laxton, Digby and Longford, in the County of Victoria.
8. The Improvement District of Bicroft, the townships of Anson, Hindon and Minden, Cardiff, Dysart, Bruton, Clyde, Dudley, Eyre, Guilford, Harburn, Harcourt and

Havelock, Glamorgan, Lutterworth, Monmouth, Sherborne, McClintock and Livingstone, and Snowdon and Stanhope, in the Provisional County of Haliburton.

(3) No dump shall be established or operated in the following parts of the territorial districts of Ontario:

1. The City of Sault Ste. Marie, the towns of Blind River, Bruce Mines, Thessalon and Elliot Lake, and the villages of Hilton Beach and Iron Bridge, in the Territorial District of Algoma.
2. The City of Timmins, the towns of Cochrane, Hearst, Iroquois Falls, Kapuskasing and Smooth Rock Falls, and the townships of Glackmeyer, Tisdale and Whitney, in the Territorial District of Cochrane.
3. The towns of Dryden, Keewatin, Kenora, and Sioux Lookout, and the townships of Jaffray and Melick, in the Territorial District of Kenora.
4. The towns of Gore Bay and Little Current, in the Territorial District of Manitoulin.
5. That part of the District Municipality of Muskoka that, on the 31st day of December, 1970, was the towns of Bala, Bracebridge, Gravenhurst and Huntsville, and the villages of Port Carling, Port Sydney and Windermere.
6. The City of North Bay, the towns of Cache Bay, Mattawa and Sturgeon Falls, and the townships of Bonfield, East Ferris, Field and Springer, in the Territorial District of Nipissing.
7. The towns of Kearney, Parry Sound, Powassan and Trout Creek, the villages of Burk's Falls, Magnetawan, Rosseau, South River and Sundridge, and the townships of Foley, McDougall, North Himsworth, and South Himsworth, in the Territorial District of Parry Sound.
8. The towns of Fort Frances and Rainy River, and the Township of Atikokan, in the Territorial District of Rainy River.
9. That part of The Regional Municipality of Sudbury and the Territorial District of Sudbury that, on the 31st day of December, 1972, was the City of Sudbury, the towns of Capreol, Coniston, Copper Cliff, Espanola, Levack, Lively, Massey and Webbwood, and the townships of Balfour, Falconbridge, and Neelon and Garson, in the Territorial District of Sudbury.
10. The City of Thunder Bay, the Town of Geraldton and the townships of Beardmore, Manitowadge, Neebing, Nipigon, Oliver, Paipoonge, Schreiber, Shuniah, and Terrace Bay, and the improvement districts of Nakina and Red Rock, in the Territorial District of Thunder Bay.



11. The towns of Charlton, Cobalt, Englehart, Haileybury, Kirkland Lake, Latchford, and New Liskeard, the Village of Thornloe, and the townships of Armstrong, Bucke, Larder Lake and McGarry, in the Territorial District of Timiskaming.  
R.R.O. 1980, Reg. 309, s.11.

12. The following are prescribed as standards for the location, maintenance and operation of an organic soil conditioning site:

1. The site shall be so located that it is an adequate distance from any watercourse, as determined by the land slope, to prevent direct surface drainage to the watercourse.
2. The site shall be at least 300 feet from the nearest individual dwelling.
3. The site shall be at least 1,500 feet from any area of residential development.
4. The site shall be so located that the maximum level of the ground water table at the site is at a sufficient distance below the surface to prevent the impairment of ground water in aquifers as determined by the permeability of the soil.
5. The site shall be at least 300 feet from any water wells.
6. No processed organic waste shall be applied to the site during any period in which conditions are such that surface runoff is likely to occur taking into account land slope, soil permeability and the climatic conditions of the area.
7. The site shall be established only on land that is, or is intended to be, used for pasture, fallow or the growing of forage crops,
  - i. during the current growing season, or
  - ii. where application of the processed organic waste is made sometime after the current growing season, to the end of the subsequent growing season.
8. Berms and dykes of low permeability shall be constructed on the site where necessary to isolate the site and effectively prevent the egress of contaminants.  
R.R.O. 1980, Reg. 309, s.12.

#### STANDARDS FOR WASTE MANAGEMENT SYSTEMS

13. The following are prescribed as standards for the operation of a waste management system:



1. All waste collection vehicles and waste carriers shall be so constructed as to enable waste to be transferred safely and without nuisance from storage containers to the vehicle.
2. Bodies of waste collection vehicles and waste carriers shall be so constructed as to withstand abrasion and corrosion from the waste.
3. Bodies of waste collection vehicles and waste carriers shall be leakproof and covered where necessary to prevent the emission of offensive odours, the falling or blowing of waste material from the vehicles or the release of dust or other air-borne materials that may cause air pollution.  
R.R.O. 1980, Reg. 309, s.13.
4. Valves that are part of a waste transportation vehicle used for transporting liquid industrial waste or hazardous waste shall have a locking mechanism and shall be locked when the vehicle contains the waste and the driver of the vehicle is not in attendance.
5. Whenever liquid industrial waste or hazardous waste is being transferred to or from a waste transportation vehicle, the driver of the vehicle must be present unless the generator or receiver is present.
6. A waste transportation vehicle used for transporting liquid industrial waste or hazardous waste shall be clearly marked with the name and number appearing on the certificate of approval or provisional certificate of approval that authorizes the transportation.
7. Where a waste transportation vehicle is used for transporting liquid industrial waste or hazardous waste, a copy of the certificate of approval or provisional certificate of approval that authorizes that transportation shall be kept in the vehicle.
8. A waste transportation vehicle used for transporting liquid industrial waste or hazardous waste shall be constructed, maintained, operated and marked or placarded in accordance with the applicable requirements of the Transportation of Dangerous Goods Act (Canada).
9. The driver of a waste transportation vehicle used for the transportation of liquid industrial waste or hazardous waste shall be trained in,
  - i. the operation of the vehicle and waste management equipment,
  - ii. relevant waste management legislation, regulations and guidelines,
  - iii. major environmental concerns pertaining to the waste to be handled,

- iv. occupational health and safety concerns pertaining to the waste to be handled, and
  - v. emergency management procedures for the wastes to be handled.
- O.Reg. 322/85, s.8.

#### MANAGEMENT OF ASBESTOS WASTE

14.(1) The management of asbestos waste shall be carried out in accordance with the following provisions:

1. No person shall cause or permit asbestos waste to leave the location at which it is generated except for the purpose of transporting it to a waste disposal site, the operator of which has agreed to accept it and has been advised as to its anticipated time of arrival, and,
  - i. the asbestos waste is in a rigid, impermeable, sealed container of sufficient strength to accommodate the weight and nature of the waste, or
  - ii. where the asbestos waste is being transported in bulk, it is transported by means of a waste management system operating under a certificate of approval or provisional certificate of approval that specifically authorizes the transportation of asbestos waste in bulk.
2. Where a container referred to in subparagraph i of paragraph 1 is a cardboard box, the waste must be sealed in a six-mil polyethylene bag placed within the box.
3. Every container referred to in subparagraph i of paragraph 1 must be free from punctures, tears or leaks.
4. The external surfaces of every container referred to in subparagraph i of paragraph 1 and of every vehicle or vessel used for the transport of asbestos waste must be free from asbestos waste.
5. Both sides of every vehicle used for the transportation of asbestos waste and every container referred to in subparagraph i of paragraph 1 must display thereon in large, easily legible letters that contrast in colour with the background the word "CAUTION" in letters not less than ten centimetres in height and the words:

CONTAINS ASBESTOS FIBRES

Avoid Creating Dust and Spillage  
Asbestos May be Harmful To Your Health  
Wear Approved Protective Equipment

6. Asbestos waste being transported from the location at which it is generated,
  - i. shall be transported,
    - A. by a driver trained in the management of asbestos waste,
    - B. as directly as may be practicable, to the waste disposal site at which disposal of the asbestos waste is intended to take place,
  - ii. shall not be transferred to a transfer station or other waste disposal site where disposal of the asbestos waste will not take place, but it may be transported to a waste disposal site operating under a certificate of approval or provisional certificate of approval that specifically authorizes acceptance and processing of asbestos waste,
  - iii. shall not be transported with any other cargo in the same vehicle,
  - iv. shall not be transported in a compaction type waste haulage vehicle,
  - v. where it is being transported in cardboard boxes, shall be in an enclosed vehicle,
  - vi. shall be properly secured and covered with a suitable tarpaulin or net if it is transported in a vehicle that is not enclosed, and
  - vii. shall be transported only in vehicles equipped with emergency spill clean-up equipment including a shovel, a broom, wetting agent, protective clothing, a supply of six-mil polyethylene bags, bag closures and personal respiratory equipment.
7. During the transportation or unloading thereof, any asbestos waste that is loose or in a container that is punctured, broken or leaking shall be packaged, immediately on discovery, in a six-mil polyethylene bag.
8. Where containers of asbestos waste are being unloaded, the unloading shall be carried out so that no loose

asbestos or punctured, broken or leaking containers of asbestos waste are landfilled.

9. Asbestos waste may be deposited only at locations in a landfilling site that have been adapted for the purpose of receiving asbestos waste or are otherwise suitable for that purpose.
10. Asbestos waste may be deposited at a landfilling site only while the depositing is being supervised by the operator of the site or a person designated by him for the purpose and the person supervising is not also operating machinery or the truck involved.
11. Where asbestos waste is deposited, as set out in paragraph 9, at least 125 centimetres of garbage or cover material must be placed forthwith over the deposited asbestos waste in such a manner that direct contact with compaction equipment or other equipment operating on the site is avoided.
12. Every person handling asbestos waste or containers of asbestos waste, supervising the unloading of asbestos waste in bulk or cleaning asbestos waste residues from containers, vehicles or equipment shall wear protective clothing and personal respiratory equipment while so doing.
13. Protective clothing that has been or is suspected of having been in contact with asbestos waste shall be changed at the site of the exposure and either properly disposed of as asbestos waste or washed at the end of the working day.
14. Disposable protective clothing shall not be reused.
15. Every person directly or indirectly involved in the transportation, handling or management of asbestos waste shall take all precautions necessary to prevent asbestos waste from becoming airborne.  
O.Reg. 175/83, s.3.

14.(2) The provisions set out in subsection (1) do not apply to the extent that they are incompatible with terms and conditions set out in a certificate of approval or a provisional certificate of approval issued under section 38 of the Act.  
O.Reg. 574/84, s.1.

## GENERATOR REGISTRATION

15.-(1) Every generator shall submit an initial Generator Registration Report in Form 2 to the Director in respect of the waste generation facility and each subject waste he produces, collects, handles or stores or that he is likely to produce, collect, handle or store.

(2) Every report referred to in subsection (1) or (4) shall contain such data, analysis and information as will enable the Director to satisfy himself as to the quality and nature of the waste.

(3) Upon receipt of an initial Generator Registration Report, the Director shall issue to the generator a generator registration document with a generator registration number and the applicable waste numbers accepted by the Director.

(4) Where there is a change from the information submitted in the initial Generator Registration Report or any previous supplementary Generator Registration Reports in respect of name, address, or telephone number, addition of subject wastes or significant change in the description or physical or chemical characteristics of the subject wastes, the generator who submitted the applicable report shall send a supplementary Generator Registration Report to the Director within fifteen days after the change.

(5) No generator shall transfer a particular subject waste to a waste transportation system until he has obtained a generator registration document with a waste number for that waste.

(6) If a change that is required to be reported by subsection (4) involves the variation of a subject waste or the production, collection, handling or storage of a new subject waste, the generator shall not transfer the subject waste to a waste transportation system until he has obtained reissue of his generator registration document specifically addressing the change.

(7) Every generator shall use his generator registration number and applicable waste numbers in all transfers of subject waste under this Regulation.

(8) Every generator shall keep a record of the subject waste disposed of at the waste generation facility including the name, waste number, quantity and disposition of the waste.

(9) A record referred to in subsection (8) may be disposed of after two years.

(10) When any subject waste is retained at a waste generation facility for a period longer than three months, the generator, unless there is a waste disposal site certificate of approval or provisional certificate of approval in respect of the facility, shall submit a report to the Regional Director of the Ministry

within five business days after the three month period which report shall include the name and waste number of the waste, the quantity involved, the manner in which it is stored, the reasons for the retention and the anticipated time and manner of disposal of the waste.

(11) Every generator who transfers subject waste to a waste transportation system shall orally report to the Director any subject waste transferred by him that he is not able, within four weeks, to confirm was delivered to the intended receiving facility or to another receiving facility approved to accept the waste.

(12) In unusual circumstances, such as a spill, a process aberration or upset, or the circumstances described in subsection 19(2), where a generator discovers that he needs a generator registration number or a waste number to comply with this Regulation in the disposal of subject waste, the Regional Director of the Ministry or an alternate named by him may assign a generator registration number or accept a waste number identified by the generator.

(13) Where a generator registration number is assigned under subsection (12), subsection (5) does not apply and subsections (1) and (2) shall be complied with within ninety days.

(14) Where a waste number is accepted under subsection (12), subsections (5) and (6) do not apply.

(15) For purposes of this section,

- (a) "liquid waste" means waste that has a slump of more than 150 millimetres using the Test Method for the Determination of Liquid Waste (slump test); and
- (b) "subject waste" includes waste producing leachate containing any of the contaminants listed in Schedule 4 at a concentration between ten and one hundred times that specified in the Schedule when tested using the Leachate Extraction Procedure or an equivalent test method approved by the Director.

(16) Except as provided in subsection (17), this section does not apply to any generator until one year after this section comes into force.

(17) This section applies to every generator who submits, within one year after this section comes into force, an initial Generator Registration Report under subsection (1) on and after the day he receives his generator registration document.  
O.Reg. 322/85, s.9.

MANIFESTS - GENERATOR REQUIREMENTS

16.-(1) No generator shall permit subject waste to pass from his control or to leave the waste generation facility except by transfer of the subject waste to a waste transportation system operating under a certificate of approval or provisional certificate of approval and unless the generator has completed a manifest in respect of the waste in accordance with this Regulation.

(2) No generator shall transfer subject waste to a waste transportation system unless the subject waste is so packaged or marked that it meets the transport requirements of the Transportation of Dangerous Goods Act (Canada).  
O.Reg. 322/85, s.9.



MANIFESTS - CARRIER REQUIREMENTS

17. Every carrier shall report to the Director the number of every intact manifest supplied to him that is lost, spoiled or used other than in accordance with this Regulation.

18.-(1) No carrier shall have possession of subject waste unless he has, accompanying the waste, a manifest in respect of the waste, completed by the generator in accordance with this Regulation, except during a transfer while the manifest is being completed by a generator or receiver.

(2) For purposes of subsection (1) a manifest is not completed by a generator in accordance with this Regulation if it contains an obvious error.

19.-(1) No carrier shall permit subject waste to pass from his control except in accordance with this Regulation.

(2) A carrier, with the specific approval of a Regional Director of the Ministry or an alternate named by him, may transfer subject waste in Ontario to another vehicle in the same waste transportation system or to a waste transportation system operating under a certificate of approval or provisional certificate of approval or to a receiving facility to alleviate a dangerous situation.

(3) Where a truckload or less of subject waste has been transferred by a generator to a waste transportation system, the carrier shall promptly transport the waste to the receiving facility named in the manifest related to that load unless he is permitted to do otherwise by subsection (2) or section 24.  
O.Reg. 322/85, s.9.



MANIFESTS - TRANSPORT WITHIN ONTARIO

20.-(1) This section applies where a generator transfers subject waste in Ontario to a waste transportation system for transport to a receiving facility in Ontario and, for the purpose of this section, "generator" includes a carrier to whom subsection 19(2) applies.

(2) Where subject waste is transferred to a waste transportation system by a generator,

- (a) for each truckload or part thereof transferred, the carrier shall complete section B (carrier) of an intact manifest and give the manifest, at the time of the transfer, to the generator; and
- (b) for each truckload or part thereof transferred, the generator shall obtain from the carrier the intact manifest, with section B completed, and shall,
  - (i) at the time of the transfer, complete section A (generator),
  - (ii) remove Copy 1 (White) and return it to the Director within three working days after the transfer,
  - (iii) remove Copy 2 (Green) and retain it for a period of two years, and
  - (iv) return the remaining four copies of the manifest to the carrier at the time of the transfer.

(3) A carrier may transfer subject waste,

- (a) with the specific approval of a Regional Director of the Ministry or an alternate named by him, to another vehicle of the same waste transportation system, to a waste transportation system operating under a certificate of approval or provisional certificate of approval or to a specified receiving facility as mentioned in clause (b), (c) or (d) to alleviate a dangerous situation;
- (b) to a waste disposal site operating under a certificate of approval or provisional certificate of approval authorizing acceptance of the waste;
- (c) with the consent of the owner of the sewage works, to a sewage works for which an

approval under the Ontario Water Resources Act has been issued and that is not in contravention of the approval; or

- (d) to a waste-derived fuel site having a combustion unit operating under a certificate of approval issued under section 8 of the Act authorizing acceptance and combustion of the waste.

(4) Every carrier transferring waste under subsection (3) shall, at the time of the transfer, give the receiver the remaining four parts of the applicable manifest completed for that load of waste.

(5) Where a transfer of subject waste takes place under subsection (3), the receiver shall obtain from the carrier the remaining four parts of the manifest completed for that load and shall,

- (a) at the time of the transfer, complete section C (Receiver) of the remaining four parts of the manifest;
- (b) remove Copy 3 (Yellow) of the manifest and return it to the Director within three working days after the transfer;
- (c) remove Copy 4 (Pink) of the manifest and return it to the carrier at the time of the transfer;
- (d) retain Copy 5 (Blue) of the manifest for two years; and
- (e) remove Copy 6 (Brown) of the manifest and return it to the generator shown on the manifest within three working days after the transfer.

(6) Every carrier transferring waste under subsection (3) shall, prior to leaving the site of the transfer, obtain from the receiver of the waste Copy 4 (Pink) of the manifest referred to under clause (5) (c) and shall retain it for a period of two years.

(7) Every carrier who is the operator of a waste transportation system for which a certificate of approval or provisional certificate of approval as a dust suppression waste management system is issued may deposit for the purpose of dust suppression, in accordance with the provisions of the approval, dust suppressant at a dust suppression site designated in the approval and, where that is done, shall,

- (a) at the time of completion of the deposit, complete section C (Receiver) of the

remaining four parts of the applicable manifest received under subclause (2) (b) (iv);

- (b) remove Copy 3 (Yellow) of the manifest and return it to the Director within three working days after the deposit;
- (c) retain Copy 4 (Pink) of the manifest for two years; and
- (d) remove Copy 6 (Brown) of the manifest and return it to the generator shown on the manifest within three working days after the deposit.

O.Reg. 322/85, s.9.

MANIFESTS - TRANSPORT OUT OF ONTARIO

21.-(1) This section applies where a generator transfers subject waste in Ontario to a waste transportation system for transport to a receiving facility outside Ontario.

(2) Where subject waste is transferred for transport to a receiving facility in a Canadian jurisdiction a manifest issued under the Transportation of Dangerous Goods Act (Canada) or an equivalent manifest issued by a Canadian jurisdiction may be used for purposes of compliance with this Regulation.

(3) Where subject waste is transferred for transport to a receiving facility in a Canadian jurisdiction and the laws of that jurisdiction require submission to authorities in that jurisdiction of the equivalent of Copy 1 or 3 of a manifest, submission to the Director of a photocopy of the copy submitted or of a copy retained may be substituted for the requirement to submit Copy 1 or 3 of a manifest.

(4) Where subject waste is transferred to a waste transportation system by a generator,

- (a) for each truckload or portion thereof transferred, the carrier shall complete section B (carrier) of an intact manifest and give the manifest, at the time of the transfer, to the generator, and
- (b) for each truckload or portion thereof transferred, the generator shall obtain from the carrier the intact manifest, with section B completed, and shall,
  - (i) at the time of the transfer, complete section A (generator),
  - (ii) remove Copy 1 (White) and return it to the Director within three working days after the transfer,
  - (iii) remove Copy 2 (Green) and retain it for two years, and
  - (iv) return the remaining four copies of the manifest to the carrier at the time of the transfer.

(5) No carrier shall transport subject waste out of Ontario destined for a receiving facility outside Ontario unless the carrier has reason to believe the intended receiver is willing to complete section C (receiver) of the applicable manifest completed for that load of waste.

(6) Every carrier transferring subject waste to a receiving facility outside Ontario shall, at the time of the transfer,

give the receiver the remaining four parts of the applicable manifest for completion of section C (receiver).

(7) Every carrier who transfers waste under subsection (6) shall,

- (a) return Copy 3 (Yellow) of the manifest to the Director within three working days after the transfer;
- (b) retain Copy 4 (Pink) of the manifest for two years; and
- (c) remove Copy 6 (Brown) of the manifest and return it to the generator indicated on the manifest within three working days after the transfer.

(8) Every manifest referred to in subsection (7) shall have section C (receiver) completed by the receiver.  
O.Reg. 322/85, s.9.

MANIFESTS - TRANSPORT INTO ONTARIO

22.-(1) This section applies where subject waste is transferred outside Ontario to a waste transportation system for transport to a receiving facility in Ontario.

(2) Where subject waste is transferred in Canada for transport to a receiving facility in Ontario, a manifest under the Transportation of Dangerous Goods Act (Canada) or any equivalent manifest issued by a Canadian jurisdiction may be used for purposes of compliance with this Regulation.

(3) No carrier shall bring subject waste into Ontario for purposes of transport to a receiving facility in Ontario unless,

- (a) the waste was accepted from a generator who has a generator registration document specifying a generator registration number and the applicable waste numbers under section 15 unless section 15 does not apply to that generator;
- (b) for each truckload or portion thereof to be transferred, the carrier completed section B (carrier) of an intact manifest and gave it, at the time of the transfer to the generator for completion of section A (generator) and return to the carrier; and
- (c) the applicable manifest with section B (carrier) completed by the carrier and section A (generator) completed by the generator accompanies the waste.

(4) Every carrier who brings subject waste into Ontario for transfer to a receiving facility in Ontario shall forward to the Director, within three working days after the out of province transfer, Copy 1 (White) of the applicable manifest showing the generator registration Number and the applicable waste number.

(5) A carrier may transfer subject waste,

- (a) to a waste disposal site operating under a certificate of approval or provisional certificate of approval authorizing acceptance of the waste;
- (b) with the consent of the owner of the sewage works, to a sewage works for which an approval under the Ontario Water Resources Act has been issued, and that is not in contravention of the approval;

- (c) to a waste-derived fuel site having a combustion unit operating under a certificate of approval issued under section 8 of the Act authorizing acceptance and combustion of the waste.

(6) Every carrier transferring waste under subsection (5) shall, at the time of the transfer, give the receiver the remaining four parts of the applicable manifest completed in respect of the waste.

(7) Where a transfer of subject waste takes place under subsection (5), the receiver shall obtain from the carrier the remaining four parts of the manifest completed in respect of that load of waste and shall,

- (a) at the time of the transfer, complete section C (Receiver) of the remaining four parts of the manifest;
- (b) remove Copy 3 (Yellow) of the manifest and return it to the Director within three working days after the transfer;
- (c) remove Copy 4 (Pink) of the manifest and return it to the carrier at the time of the transfer;
- (d) retain Copy 5 (Blue) of the manifest for two years; and
- (e) remove Copy 6 (Brown) of the manifest and return it to the generator shown on the manifest within three working days after the transfer.

(8) Every carrier who has transferred waste under subsection (5) shall, prior to leaving the site of the transfer, obtain from the receiver copy 4 (Pink) of the applicable manifest and shall retain it for two years.

(9) Every carrier who is the operator of a waste transportation system for which a certificate of approval or provisional certificate of approval as a dust suppression waste management system is issued may deposit for the purpose of dust suppression, in accordance with the provisions of the approval, dust suppressant at a dust suppression site designated in the approval and, where that is done, shall,

- (a) at the time of completion of the deposit, complete section C (Receiver) of the remaining four parts of the manifest accompanying the waste;
- (b) remove Copy 3 (Yellow) of the manifest and return it to the Director within three working days after the deposit;

- (c) retain Copy 4 (Pink) of the manifest for two years; and
- (d) remove Copy 6 (Brown) of the manifest and return it to the generator shown on the manifest within three working days after the deposit.

O.Reg. 322/85, s.9.



MANIFESTS - TRANSPORT THROUGH ONTARIO

23.-(1) No carrier shall transport through Ontario subject waste from outside Ontario for transfer to a receiving facility outside Ontario unless he has with the waste, for each truckload or portion thereof, a manifest completed in accordance with the requirements of the jurisdiction issuing the manifest.

(2) Where this section applies, a manifest issued under the Transportation of Dangerous Goods Act (Canada) or an equivalent manifest issued by a Canadian jurisdiction or a Uniform Hazardous Waste Manifest as prescribed by the United States Environmental Protection Agency may be used for purposes of compliance with this Regulation.

O.Reg. 322/85, s.9.

## REFUSALS

24.-(1) Where a receiver refuses to accept a transfer of subject waste he shall prepare a refusal report indicating the manifest number, the generator registration number, the carrier number and the reason for refusal and return it to the Director within three working days after the refusal.

(2) Where a carrier intends to transfer subject waste to a receiving facility and the waste is refused by the intended receiver, the carrier, before attempting to make a different transfer, shall consult and obtain the instructions of the generator, unless written instructions have been provided by the generator in advance and may transfer the waste to a receiving facility indicated in the instructions.

(3) If waste is refused by the intended receiver at the receiving facility and if the carrier cannot conveniently make a different transfer in accordance with this Regulation, the carrier may transfer the unadulterated waste to the waste generation facility set out in Section A (Generator) of the applicable manifest and the carrier shall, at the time of the transfer, give the generator four parts of the applicable manifest completed by the generator in accordance with this Regulation.

(4) Every generator shall accept a transfer of unadulterated subject waste in the circumstances described in subsection (3).

(5) Where a transfer of subject waste occurs under subsection (3), the generator shall obtain from the carrier the remaining four parts of the applicable manifest completed by the generator in accordance with this Regulation and shall,

- (a) at the time of the transfer, complete section C (Receiver) of the remaining four parts of the manifest;
- (b) return Copy 3 (Yellow) to the Director within three working days after the transfer;
- (c) return Copy 4 (Pink) to the carrier at the time of the transfer; and
- (d) retain Copy 6 (Brown) for two years.

(6) Every carrier who has transferred waste under subsection (3) shall, prior to leaving the site of the transfer, obtain from the receiver Copy 4 (Pink) of the applicable manifest and shall retain it for two years.

(7) A waste generation facility is exempt from the requirement of a waste disposal site certificate of approval under section 27 of the Act in respect of an acceptance of waste under this section.  
O.Reg.322/85, s.9.



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# MANIFEST / MANIFESTE

\*Regulation 309, R.R.O. 1980, Form 1.\*

\*Règlement 309, R.R.O. de 1980, formule 1.\*

CONFORMS TO TRANSPORTATION OF DANGEROUS GOODS REGULATIONS  
UNDER TDG ACT, CHAPTER 36, SC 1980

CONFORMEMENT AU RÈGLEMENT SUR LE TRANSPORT DES MARCHANDISES  
DANGEREUSES EN APPLICATION DE LA LOI SUR TMD, CHAPITRE 36, SC 1980

<b>A</b> Generator (Consignor) Producteur (Expéditeur)		Generator Registration No. / No d'inscription du producteur (Provincial No.) / (No provincial)	
Company Name / Nom de la compagnie		<b>B</b> Carrier Transporteur	
Head Office Address / Adresse du siège social City / Ville Prov. Postal Code / Code postal		Certificate of Approval No. / No de certificat d'approbation (Provincial No.) / (No provincial)	
Shipping Site Address / Adresse du lieu d'expédition City / Ville Prov. Postal Code / Code postal		Company Name / Nom de la compagnie	
Intended Receiver (Consignee) / Réceptionnaire (Destinataire) prévu Receiver No. / No du réceptonnaire (Provincial No.) / (No provincial)		Address / Adresse City / Ville Prov. Postal Code / Code postal	
Receiving Site Address / Adresse du lieu de réception City / Ville Prov. Postal Code / Code postal		<b>C</b> Receiver (Consignee) Réceptionnaire (Destinataire)	
Physical State (Solid, Liquid, Gas) / État physique (Solide, liquide, gaz)		Receiver No. / No du réceptonnaire (Provincial No.) / (No provincial)	
Shipping Name of Waste / Appellation réglementaire des déchets transportés		Company Name / Nom de la compagnie	
Waste Identification No. / No d'identification des déchets Provincial TDGA LTMD		Address / Adresse City / Ville Prov. Postal Code / Code postal	
Quantity Shipped / Quantité expédiée Units L / kg		Receiving Site Address / Adresse du lieu de réception City / Ville Prov. Postal Code / Code postal	
Classification		Date Received / Date de réception Day / Jour Mon / Mois Yr / An Time / Heure <input type="checkbox"/> A.M. <input type="checkbox"/> P.M.	
Packing Group / Groupe d'emballage		Identify Any Shipment Discrepancy / Problèmes. Attach addendum if necessary. Indiquer toute différence relative à l'expédition. Joindre une feuille au besoin.	
Concentration		Handling Code / Code de manipulation	
Packaging Containers		Decontamination / Décontamination Packaging Containers / Véhicule Yes / No Yes / No	
Special Handling / Emergency Instructions / Instructions spéciales de manipulation ou en cas d'urgence		Quantity Received / Quantité reçue Units L / kg	
Attached Annexes <input type="checkbox"/> Below Crossed <input type="checkbox"/>		If handling code "other" specify / Si le code de manipulation est "autre", préciser	
Date Shipped / Date d'expédition Day / Jour Mon / Mois Yr / An Time / Heure <input type="checkbox"/> A.M. <input type="checkbox"/> P.M.		If waste to be transferred specify intended company name / Si les déchets doivent être transférés, préciser le nom de l'entreprise	
Scheduled Arrival Date / Date d'arrivée prévue Day / Jour Mon / Mois Yr / An		Receiver No. / (Provincial No.) / No du réceptonnaire (No provincial)	
Generator (Consignor) Certification: I declare that the information contained in Section A is correct and complete. / Déclaration du producteur (expéditeur): J'atteste que les renseignements inscrits à la partie A sont exacts et complets.		Address / Adresse City / Ville Prov.	
Name of Authorized Person (print) / Nom de la personne autorisée (lettres moulées)		Receiver (Consignee) Certification: I declare that the information contained in Section C is correct and complete. / Déclaration du réceptonnaire (destinataire): J'atteste que les renseignements inscrits à la partie C sont exacts et complets.	
Signature		Name of Authorized Person (print) / Nom de la personne autorisée (lettres moulées)	
Tel No. (Area Code) / No de tél. (ind. reg.)		Signature	
( ) ( ) ( ) ( ) ( ) ( )		Tel No. (Area Code) / No de tél. (ind. reg.)	
( ) ( ) ( ) ( ) ( ) ( )		( ) ( ) ( ) ( ) ( ) ( )	

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Form 1 - O.Reg. 322/85, s.10.  
Environmental Protection Act



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# Environmental Protection Act

## Generator Registration Report

"Regulation 309, R.R.O. 1980, Form 2"

## Rapport d'inscription du producteur

"Règlement 309, R.R.O. de 1980, formule 2"

NOTE: Regulation 309 requires generators of hazardous or liquid industrial wastes to submit a Generator Registration Report using this form respecting each waste generation facility and each hazardous or liquid industrial waste.

REMARQUE: Le règlement 309 exige que les producteurs de déchets industriels liquides ou dangereux présentent un Rapport d'inscription du producteur en se servant de la présente formule pour chaque lieu de production de déchets et chaque déchet industriel liquide ou dangereux.

### Part I - Generator Identification / Partie I - Identification du producteur

This report is / Le présent rapport constitue:		Generator Registration Number N° d'inscription du producteur	
1. <input type="checkbox"/> an initial generator registration report / un premier rapport d'inscription du producteur	<div></div>		
or / ou			
2. <input type="checkbox"/> a revision - enter Ontario Generator Registration No. une révision - veuillez inscrire le numéro d'inscription du producteur de l'Ontario	<div></div>		
3. For generators located outside of Ontario, enter Registration/Notification number assigned by your local environmental authority. / Si vous êtes un producteur de l'extérieur de l'Ontario, veuillez inscrire le numéro d'inscription/d'identification attribué par les autorités locales en matière d'environnement.		<div></div>	
Name of Generator (Enter the corporate name or, if a partnership or proprietorship, the name of the principal(s). If the generator intends to carry on business under a separate name or style, this should also be entered.) / Nom du producteur (Veuillez inscrire la dénomination sociale ou, s'il s'agit d'une société en nom collectif ou d'une société à propriétaire unique, le nom du (des) principal (principaux) propriétaire(s). Si le producteur envisage d'exploiter une entreprise sous une dénomination ou un nom distinct, veuillez également le noter.)			
4. Name / Nom <div></div>			
5. Address / Adresse <div></div>			
6. Municipality / Municipalité <div></div>		Province/State Province/État <div></div>	Postal Code / Code postal <div></div>
7. Site location / Lieu des installations <div></div>			
8. Municipality / Municipalité <div></div>		Province/State Province/État <div></div>	Postal Code / Code postal <div></div>
9. Name of contact / Nom de la personne à contacter <div></div>		Tel No. / N° de tél. <div></div>	
10. Standard Industrial Classification Codes (SIC) for Site noted in Section 7. / Codes de la classification des activités économiques pour les installations décrites au n° 7 <div></div> <div></div> <div></div>			
11. Total number of wastes to be registered with this report / Nombre total de déchets à inscrire au moyen de ce rapport		<div></div>	
12. Name of Company Official / Nom du représentant autorisé de la compagnie		13. Position / Poste	
14. Signature / Signature		15. Date / Date	
..... PENALTY ..... PÉNALITÉ .....			
16. Ministry Use Only / Réservé au ministère		County Code / Code de comté	
		Regional District Code / Code de région distinct	
		Municipal Code / Code de municipalité	
		Inter City Tie Line / Ligne privée interurbaine	

## Part 2 – Waste Identification / Partie 2 – Identification des déchets

Part 3 – Waste Management / *Partie 3 – Gestion des déchets*1487 (5/85) Page 2 of 2

SCHEDULE 1 - O.Reg. 322/85, s.11.HAZARDOUS INDUSTRIAL WASTESHazardous Industrial Waste from Non-specific Sources

<u>Industry and No.</u>	<u>Waste</u>
NA9301	The following spent halogenated solvents used in degreasing: tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride, and chlorinated fluorocarbons; and sludges from the recovery of these solvents in degreasing operations.
NA9302	The following spent halogenated solvents: tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, and trichlorofluoromethane; and the still bottoms from the recovery of these solvents.
NA9303	The following spent non-halogenated solvents: xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; and the still bottoms from the recovery of these solvents.
NA9304	The following spent non-halogenated solvents: cresols and cresylic acid, and nitrobenzene; and the still bottoms from the recovery of these solvents.
NA9305	The following spent non-halogenated solvents: toluene, methyl ethyl ketone, carbon disulphide, isobutanol, and pyridine; and the still bottoms from the recovery of these solvents.
NA9306	Wastewater treatment sludges from electroplating operations except from the following processes: (1) sulphuric acid anodizing of aluminum; (2) tin plating on carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-aluminum plating on carbon steel; (5) cleaning/stripping associated with tin, zinc and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum.
NA9307	Wastewater treatment sludges from the chemical conversion coating of aluminum.



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NA9308	Spent cyanide plating bath solutions from electroplating operations (except for precious metals electroplating spent cyanide plating bath solutions).
NA9309	Plating bath sludges from the bottom of plating baths from electroplating operations where cyanides are used in the process (except for precious metals electroplating bath sludges).
NA9310	Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process (except for precious metals electroplating spent stripping and cleaning bath solutions).
NA9311	Quenching bath sludge from oil baths from metal heat treating operations where cyanides are used in the process (except for precious metals heat treating quenching bath sludges).
NA9312	Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations (except for precious metals heat treating spent cyanide solutions from salt bath pot cleaning).
NA9313	Quenching wastewater treatment sludges from metal heat treating operations where cyanides are used in the process (except for precious metals heat treating quenching wastewater treatment sludges).
NA9314	Cyanidation wastewater treatment tailing pond sediment from mineral metals recovery operations.
NA9315	Spent cyanide bath solutions from mineral metals recovery operations.

#### Hazardous Industrial Waste from Specific Sources

<u>Industry and No.</u>	<u>Waste</u>
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##### Wood Preservation:

NA9316	Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol.
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Inorganic Pigments:

NA9317	Wastewater treatment sludge from the production of chrome yellow and orange pigments.
NA9318	Wastewater treatment sludge from the production of molybdate orange pigments.
NA9319	Wastewater treatment sludge from the production of zinc yellow pigments.
NA9320	Wastewater treatment sludge from the production of chrome green pigments.
NA9321	Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated).
NA9322	Wastewater treatment sludge from the production of iron blue pigments.
NA9323	Oven residue from the production of chrome oxide green pigments.

Organic Chemicals:

NA9324	Distillation bottoms from the production of acetaldehyde from ethylene.
NA9325	Distillation side cuts from the production of acetaldehyde from ethylene.
NA9326	Bottom stream from the wastewater stripper in the production of acrylonitrile.
NA9327	Bottom stream from the acetonitrile column in the production of acrylonitrile.
NA9328	Bottoms from the acetonitrile purification column in the production of acrylonitrile.
NA9329	Still bottoms from the distillation of benzyl chloride.
NA9330	Heavy ends or distillation residues from the production of carbon tetrachloride.
NA9331	Heavy ends (still bottoms) from the purification column in the production of epichlorohydrin.
NA9332	Heavy ends from the fractionation column in ethyl chloride production.



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NA9333 Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production.

NA9334 Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production.

NA9335 Aqueous spent antimony catalyst waste from fluoromethanes production.

NA9336 Distillation bottom tars from the production of phenol/acetone from cumene.

NA9337 Distillation light ends from the production of phthalic anhydride from naphthalene.

NA9338 Distillation bottoms from the production of phthalic anhydride from naphthalene.

NA9339 Distillation light ends from the production of phthalic anhydride from ortho-xylene.

NA9340 Distillation bottoms from the production of phthalic anhydride from ortho-xylene.

NA9341 Distillation bottoms from the production of nitrobenzene by the nitration of benzene.

NA9342 Stripping still tails from the production of methyl ethyl pyridines.

NA9343 Centrifuge and distillation residues from toluene diisocyanate production.

NA9344 Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane.

NA9345 Waste from the product stream stripper in the production of 1,1,1-trichloroethane.

NA9346 Distillation bottoms from the production of 1,1,1-trichloroethane.

NA9347 Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane.

NA9348 Column bottoms or heavy ends from the combined production of trichloroethylene and perchloroethylene.

NA9349 Distillation bottoms from aniline production.

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- NA9350 Process residues from aniline extraction from the production of aniline.
- NA9351 Combined wastewater streams generated from nitrobenzene/aniline production.
- NA9352 Distillation or fractionation column bottoms from the production of chlorobenzenes.
- NA9353 Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes.

Inorganic Chemicals:

- NA9390 Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used.
- NA9391 Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production.
- NA9392 Wastewater treatment sludge from the mercury cell process in chlorine production.

Pesticides:

- NA9354 By-product salts generated in the production of MSMA and cacodylic acid.
- NA9355 Wastewater treatment sludge from the production of chlordane.
- NA9356 Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane.
- NA9357 Filter solids from the filtration of hexachlorocyclopentadiene in the production of chlordane.
- NA9358 Vacuum stripper discharge from the chlordane chlorinator in the production of chlordane.
- NA9359 Wastewater treatment sludges generated in the production of creosote.
- NA9360 Still bottoms from toluene reclamation distillation in the production of disulphoton.
- NA9361 Wastewater treatment sludges from the production of disulphoton.

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NA9362 Wastewater from the washing and stripping of phorate production.

NA9363 Filter cake from the filtration of diethylphosphorodithioic acid in the production of phorate.

NA9364 Wastewater treatment sludge from the production of phorate.

NA9365 Wastewater treatment sludge from the production of toxaphene.

NA9366 Untreated process wastewater from the production of toxaphene.

NA9367 Heavy ends or distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5-T.

NA9368 2,6-Dichlorophenol waste from the production of 2,4-D.

NA9369 Untreated wastewater from the production of 2,4-D.

Explosives:

NA9370 Wastewater treatment sludges from the manufacturing and processing of explosives.

NA9371 Spent carbon from the treatment of wastewater containing explosives.

NA9372 Wastewater treatment sludges from the manufacturing formulation and loading of lead-based initiating compounds.

NA9373 Pink/red water from TNT operations.

Petroleum Refining:

NA9374 Dissolved air flotation (DAF) float from the petroleum refining industry.

NA9375 Slop oil emulsion solids from the petroleum refining industry.

NA9376 Heat exchanger bundle cleaning sludge from the petroleum refining industry.

NA9377 API separator sludge from the petroleum refining industry.

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NA9378 Tank bottoms (leaded) from the petroleum refining industry.

Iron & Steel:

NA9380 Emission control dust/sludge from the primary production of steel in electric furnaces.

NA9381 Spent pickle liquor from steel finishing operations.

Primary Copper:

NA9383 Acid plant blowdown slurry/sludge resulting from the thickening of blowdown slurry from primary copper production.

Primary Lead:

NA9384 Surface impoundment solids contained in and dredged from surface impoundments at primary lead smelting facilities.

Primary Zinc:

NA9385 Sludge from treatment of process wastewater and/or acid plant blowdown from primary zinc production.

NA9386 Electrolytic anode slimes/sludges from primary zinc production.

NA9387 Cadmium plant leachate residue (iron oxide) from primary zinc production.

Secondary Lead:

NA9388 Emission control dust/sludge from secondary lead smelting.

NA9389 Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting.

Veterinary Pharmaceuticals:

NA9394 Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.

NA9395 Distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.

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NA9396            Residue from the use of activated carbon for decolourization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.

Ink Formulation:

NA9393            Solvent washes and sludges, caustic washes and sludges, or water washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments, driers, soaps, and stabilizers containing chromium and lead.

Coking:

NA9379            Ammonia still lime sludge from coking operations.

NA9397            Decanter tank tar sludge from coking operations.

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SCHEDULE 1E - O.Reg. 322/85, s.11.

EXEMPT HAZARDOUS INDUSTRIAL WASTES

(There are no wastes currently listed in this Schedule)

2A-1

SCHEDULE 2 - O.Reg. 322/85, s.11.

PART A  
ACUTE HAZARDOUS WASTE CHEMICALS

<u>NUMBER</u>	<u>NAME OF CHEMICAL</u>
ON1001	Acetaldehyde, chloro- / Chloroacetaldehyde
ON1002	Acetamide, N-(aminothioxomethyl)- / 1-Acetyl-2-thiourea
ON1003	Acetamide, 2-fluoro- / Fluoroacetamide
ON1067	Acetic acid, fluoro-, sodium salt / Sodium fluoroacetate
ON1004	Acetimidic acid, N-((methylcarbamoxy)thio-, methyl ester / Methomyl
ON1005	Acetone cyanohydrin / 2-Methylactonitrile
ON1006	3-(alpha-Acetonylbenzyl)-4-hydroxycoumarin and salts, when present at concentrations greater than 0.3 percent / Warfarin, when present at concentrations greater than 0.3 percent
ON1002	1-Acetyl-2-thiourea / Acetamide, N-(aminothioxomethyl)-
ON1007	Acrolein / 2-Propenal
ON1008	Agarin / 5-(Aminomethyl)-3-isoxazolol
ON1009	Aldicarb / Propanal, 2-methyl-2-(methylthio)-, O-((methylamino)carbonyl)oxime
ON1010	Aldrin / 1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-hexahydro-1,4:5,8- endo, exo-dimethanonaphthalene
ON1011	Allyl alcohol / 2-Propen-1-ol
ON1012	Aluminum phosphide
ON1008	5-(Aminomethyl)-3-isoxazolol / Agarin
ON1013	4-Aminopyridine / p-Aminopyridine
ON1014	Ammonium metavanadate / Ammonium vanadate
ON1015	Ammonium picrate / Phenol, 2,4,6-trinitro-, ammonium salt
ON1014	Ammonium vanadate / Ammonium metavanadate
ON1016	Arsenic acid
ON1017	Arsenic (III) oxide / Arsenic trioxide

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<u>NUMBER</u>	<u>NAME OF CHEMICAL</u>
ON1018	Arsenic (V) oxide / Arsenic pentoxide
ON1018	Arsenic pentoxide / Arsenic (V) oxide
ON1017	Arsenic trioxide / Arsenic (III) oxide
ON1019	Arsine, diethyl- / Diethylarsine
ON1020	Aziridine / Ethyleneimine
ON1021	Barium cyanide
ON1022	Benzenamine, 4-chloro- / p-Chloroaniline
ON1023	Benzenamine, 4-nitro- / p-Nitroaniline
ON1024	Benzene, (chloromethyl)- / Chlorotoluene
ON1025	1,2-Benzenediol, 4-(1-hydroxy-2-(methylamino)-ethyl)- / Epinephrine
ON1026	Benzenethiol / Phenyl mercaptan
ON1024	Benzyl chloride / (Chloromethyl)benzene
ON1027	Beryllium dust / Beryllium, metal powder
ON1028	Bis(chloromethyl) ether / Dichlorodimethyl ether
ON1029	Bromoacetone / 2-Propanone, 1-bromo-
ON1030	Brucine / 2,3-Dimethoxystrychnidin-10-one
ON1031	Calcium cyanide
ON1032	Camphene, octachloro- / Toxaphene
ON1033	Carbamimidoseleonic acid / Selenourea
ON1034	Carbon bisulphide / Carbon disulphide
ON1034	Carbon disulphide / Carbon bisulphide
ON1035	Carbonyl chloride / Phosgene
ON1036	Chlorine cyanide / Cyanogen chloride
ON1001	Chloroacetaldehyde / Acetaldehyde, chloro-
ON1022	p-Chloroaniline / 4-Chlorobenzenamine
ON1037	1-(o-Chlorophenyl)thiourea / 2-Chlorophenyl thiourea



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<u>NUMBER</u>	<u>NAME OF CHEMICAL</u>
ON1038	3-Chloropropionitrile / 3-Chloropropanenitrile
ON1024	Chlorotoluene / (Chloromethyl)benzene
ON1039	Copper cyanides
ON1040	Cyanides (soluble cyanide salts) not elsewhere specified
ON1041	Cyanogen / Ethanedinitrile
ON1036	Cyanogen chloride / Chlorocyanogen
ON1028	Dichlorodimethyl ether / Bis(chloromethyl) ether
ON1042	Dichlorophenylarsine / Phenylchloroarsine
ON1043	Dieldrin / 1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy- 1,4,4a,5,6,7,8,8a-octahydro, endo,exo-
ON1019	Diethylarsine / Arsine, diethyl-
ON1044	O,O-Diethyl S-(2-(ethylthio)ethyl) phosphorodithioate / Disulfoton
ON1045	Diethyl-p-nitrophenyl phosphate / Phosphoric acid, diethyl p-nitrophenyl ester
ON1046	O,O-Diethyl O,2-pyrazinyl phosphorothioate / Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester
ON1047	Diisopropylfluorophosphate / Phosphorofluoridic acid, bis(1-methylethyl) ester
ON1048	Dimethoate / Phosphorodithioic acid, O,O-dimethyl S-(2-(methylamino)-2-oxoethyl) ester
ON1049	3,3-Dimethyl-1-(methylthio)-2-butanone, O- ((methylamino)carbonyl) oxime / Thiofanox
ON1050	O,O-Dimethyl O-(p-nitrophenyl) phosphorothioate / Methyl parathion
ON1051	Dimethylnitrosamine / N-Nitrosodimethylamine
ON1052	alpha,alpha-Dimethylphenethylamine / Phentermine
ON1053	4,6-Dinitro-o-cresol and salts / Phenol, 2,4-dinitro-6- methyl-, and salts
ON1054	4,6-Dinitro-o-cyclohexylphenol / Phenol, 2-cyclohexyl-4,6-dinitro-

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<u>NUMBER</u>	<u>NAME OF CHEMICAL</u>
ON1055	2,4-Dinitrophenol / Phenol, 2,4-dinitro-
ON1056	Dinoseb / Phenol, 2,4-dinitro-6-(1-methylpropyl)-
ON1057	Diphosphoramidate, octamethyl- / Octamethylpyro- phosphoramidate
ON1044	Disulfoton / O,O-Diethyl S-(2-(ethylthio)ethyl) phosphorodithioate
ON1058	2,4-Dithiobiuret / 2-Thio-1-(thiocarbonyl)
ON1059	Dithiopyrophosphoric acid, tetraethyl ester / Tetraethyl dithiopyrophosphate
ON1060	Endosulfan / 5-Norbornene-2,3-dimethanol, 1,4,5,6,7,7-hexachloro-, cyclic sulphite
ON1061	Endothall / 7-Oxabicyclo(2.2.1)heptane-2,3-dicarboxylic acid
ON1062	Endrin / 1,2,3,4,10,10-Hexachloro-6,7-epoxy- 1,4,4a,5,6,7,8,8a-octahydro-endo, endo- 1,4:5,8-dimethanonaphthalene
ON1025	Epinephrine / 1,2-Benzenediol, 4-(1-hydroxy-2- (methylamino)ethyl)-
ON1052	Ethanamine, 1,1-dimethyl-2-phenyl- / alpha,alpha- Dimethylphenethylamine
ON1063	Ethenamine, N-methyl-N-nitroso- / N-Nitrosomethyl- vinylamine
ON1064	Ethyl cyanide / Propionitrile
ON1020	Ethylenimine / Aziridine
ON1065	Famphur / Phosphorothioic acid, O,O-dimethyl O-(p-((dimethylamino)sulfonyl)phenyl) ester
ON1066	Fluorine
ON1003	Fluoroacetamide / Acetamide, 2-fluoro-
ON1067	Fluoroacetic acid, sodium salt / Sodium fluoroacetate
ON1068	Fulminic acid, mercury (II) salt / Fulminate of mercury
ON1069	Heptachlor / 1,4,5,6,7,8,8-Heptachloro-3a,4,7,7a- tetrahydro-4,7-methanoindene

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<u>NUMBER</u>	<u>NAME OF CHEMICAL</u>
ON1062	1,2,3,4,10,10-Hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-endo, endo-1,4:5,8-dimethanonaphthalene / Endrin
ON1043	1,2,3,4,10,10-Hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-endo, exo-1,4:5,8-dimethanonaphthalene / Dieldrin
ON1070	1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-hexahydro-1,4:5,8-endo, endo-dimethanonaphthalene / Isodrin
ON1010	1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-hexahydro-1,4:5,8-endo, exo-dimethanonaphthalene / Aldrin
ON1071	Hexachlorohexahydro-exo, exo-dimethanonaphthalene
ON1072	Hexaethyl tetraphosphate / Tetraphosphoric acid, hexaethyl ester
ON1073	Hydrazinecarbothioamide / Thiosemicarbazide
ON1074	Hydrazine, methyl- / Methylhydrazine
ON1075	Hydrocyanic acid
ON1076	Hydrogen cyanide
ON1077	Hydrogen phosphide / Phosphine
ON1078	Isocyanic acid, methyl ester / Methyl isocyanate
ON1070	Isodrin / 1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-hexahydro-1,4:5,8-endo, endo-dimethanonaphthalene
ON1008	3(2H)-Isoxazolone, 5-(aminomethyl)- / Agarin
ON1079	Mercury, (acetato)phenyl- / Phenylmercuric acetate
ON1068	Mercury fulminate / Fulminate of mercury
ON1028	Methane, oxybis(chloro- / Dichlorodimethyl ether
ON1080	Methane, tetranitro- / Tetranitromethane
ON1081	Methanethiol, trichloro- / Trichloromethanethiol
ON1069	4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro- / Heptachlor
ON1004	Methomyl / Acetimidic acid, N-((methylcarbamoyl)-oxy)thio-, methyl ester

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<u>NUMBER</u>	<u>NAME OF CHEMICAL</u>
ON1082	2-Methylaziridine / Propyleneimine
ON1074	Methyl hydrazine / Hydrazine, methyl-
ON1078	Methyl isocyanate / Isocyanic acid, methyl ester
ON1005	2-Methylactonitrile / Acetone cyanohydrin
ON1050	Methyl parathion / O,O-Dimethyl O-(p-nitrophenyl) phosphorothioate
ON1083	alpha-Naphthylthiourea / Thiourea, 1-naphthalenyl-
ON1084	Nickel carbonyl / Nickel tetracarbonyl
ON1085	Nickel cyanide / Nickel (II) cyanide
ON1085	Nickel (II) cyanide / Nickel cyanide
ON1084	Nickel tetracarbonyl / Nickel carbonyl
ON1086	Nicotine and salts / Pyridine, (S)-3-(1-methyl-2-pyrrolidinyl)- and salts
ON1087	Nitric oxide / Nitrogen (II) oxide
ON1023	p-Nitroaniline / 4-Nitrobenzenamine
ON1088	Nitrogen dioxide / Nitrogen (IV) oxide
ON1087	Nitrogen (II) oxide / Nitric oxide
ON1088	Nitrogen (IV) oxide / Nitrogen dioxide
ON1089	Nitroglycerin / 1,2,3-Propanetriol, trinitrate-
ON1051	N-Nitrosodimethylamine / Dimethylnitrosamine
ON1063	N-Nitrosomethylvinylamine / N-Methyl-N-nitrosoethenylamine
ON1060	5-Norbornene-2,3-dimethanol, 1,4,5,6,7,7-hexachloro, cyclic sulphite / Endosulfan
ON1057	Octamethylpyrophosphoramidate / Diphosphoramidate, octamethyl-
ON1090	Osmium oxide / Osmium tetroxide
ON1090	Osmium tetroxide / Osmium oxide
ON1061	7-Oxabicyclo(2.2.1)heptane-2,3-dicarboxylic acid / Endothall

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<u>NUMBER</u>	<u>NAME OF CHEMICAL</u>
ON1091	Parathion / Phosphorothioic acid, O,O,-diethyl O-(p-nitrophenyl) ester
ON1054	Phenol, 2-cyclohexyl-4,6-dinitro- / 4,6-Dinitro-o-cyclo- hexylphenol
ON1055	Phenol, 2,4-dinitro- / 2,4-Dinitrophenol
ON1053	Phenol, 2,4-dinitro-6-methyl-, and salts / Dinitro-o- cresol and salts
ON1056	Phenol, 2,4-dinitro-6-(1-methylpropyl)- / Dinoseb
ON1015	Phenol, 2,4,6-trinitro-, ammonium salt / Ammonium picrate
ON1042	Phenyl dichloroarsine / Dichlorophenylarsine
ON1026	Phenyl mercaptan / Benzenethiol
ON1079	Phenylmercuric acetate / Mercury, (acetato)phenyl-
ON1092	N-Phenylthiourea / Phenylthiocarbamide
ON1093	Phorate / Phosphorothioic acid, O,O-diethyl S-(ethylthio)methyl ester
ON1035	Phosgene / Carbonyl chloride
ON1077	Phosphine / Hydrogen phosphide
ON1045	Phosphoric acid, diethyl p-nitrophenyl ester / Diethyl-p-nitrophenyl phosphate
ON1048	Phosphorodithioic acid, O,O-dimethyl S-(2-(methylamino)- 2-oxoethyl) ester / Dimethoate
ON1047	Phosphorofluoridic acid, bis(1-methylethyl) ester / Diisopropylfluorophosphate
ON1093	Phosphorothioic acid, O,O-diethyl S-(ethylthio)methyl ester / Phorate
ON1091	Phosphorothioic acid, O,O-diethyl O-(p-nitrophenyl) ester / Parathion
ON1046	Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester / O,O-Diethyl O,2-pyrazinyl phosphorothioate
ON1065	Phosphorothioic acid, O,O-dimethyl O-(p-((dimethylamino)- sulfonyl)phenyl) ester / Famphur

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<u>NUMBER</u>	<u>NAME OF CHEMICAL</u>
ON1094	Plumbane, tetraethyl- / Tetraethyl lead
ON1095	Potassium cyanide
ON1096	Potassium dicyanoargentate / Potassium silver cyanide
ON1096	Potassium silver cyanide / Potassium dicyanoargentate
ON1009	Propanal, 2-methyl-2-(methylthio)-, O-((methylamino)-carbonyl)oxime / Aldicarb
ON1064	Propanenitrile / Propionitrile
ON1038	Propanenitrile, 3-chloro- / 3-Chloropropionitrile
ON1005	Propanenitrile, 2-hydroxy-2-methyl- / Acetone cyanohydrin
ON1089	1,2,3-Propanetriol, trinitrate- / Nitroglycerin
ON1029	2-Propanone, 1-bromo- / Bromoacetone
ON1097	Propargyl alcohol / 2-Propyn-1-ol
ON1007	2-Propenal / Acrolein
ON1011	2-Propen-1-ol / Allyl alcohol
ON1064	Propionitrile / Ethyl cyanide
ON1082	1,2-Propylenimine / 2-Methylaziridine
ON1097	2-Propyn-1-ol / Propargyl alcohol
ON1013	4-Pyridinamine / 4-Aminopyridine
ON1086	Pyridine, (S)-3-(1-methyl-2-pyrrolidinyl)- and salts / Nicotine and salts
ON1098	Pyrophosphoric acid, tetraethyl ester / Tetraethyl pyrophosphate
ON1033	Selenourea / Carbamimidoseleonoic acid
ON1099	Silver cyanide
ON1100	Sodium azide
ON1101	Sodium cyanide
ON1067	Sodium fluoroacetate / Fluoroacetic acid, sodium salt

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<u>NUMBER</u>	<u>NAME OF CHEMICAL</u>
ON1102	Strontium sulphide
ON1103	Strychnidin-10-one and salts
ON1030	Strychnidin-10-one, 2,3-dimethoxy- / Brucine
ON1104	Strychnine and salts
ON1105	Sulphuric acid, thallium (I) salt / Thallium sulphate, solid
ON1059	Tetraethyldithiopyrophosphate / Dithiopyrophosphoric acid, tetraethyl ester
ON1094	Tetraethyl lead / Plumbane, tetraethyl-
ON1098	Tetraethyl pyrophosphate / Pyrophosphoric acid, tetraethyl ester
ON1080	Tetranitromethane / Methane, tetranitro-
ON1072	Tetraphosphoric acid, hexaethyl ester / Hexaethyl tetraphosphate
ON1106	Thallic oxide / Thallium (III) oxide
ON1106	Thallium (III) oxide / Thallic oxide
ON1107	Thallium (I) selenite
ON1105	Thallium (I) sulphate / Sulphuric acid, thallium (I) salt
ON1049	Thiofanox / 3,3-Dimethyl-1-(methylthio)-2-butanone, O-((methylamino)carbonyl) oxime
ON1058	Thioimidodicarbonic diamide / 2,4-Dithiobiuret
ON1026	Thiophenol / Phenyl mercaptan
ON1073	Thiosemicarbazide / Hydrazinecarbothioamide
ON1037	Thiourea, (2-chlorophenyl)- / 1-(o-Chlorophenyl)-2- thiourea
ON1083	Thiourea, 1-naphthalenyl- / alpha-Naphthylthiourea
ON1092	Thiourea, phenyl- / N-Phenylthiourea
ON1032	Toxaphene / Camphene, octachloro-
ON1081	Trichloromethanethiol / Methanethiol, trichloro-

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<u>NUMBER</u>	<u>NAME OF CHEMICAL</u>
ON1014	Vanadic acid, ammonium salt / Ammonium metavanadate
ON1107	Vanadium pentoxide / Vanadium (V) oxide
ON1107	Vanadium (V) oxide / Vanadium pentoxide
ON1006	Warfarin, when present at concentrations greater than 0.3 percent / 3-(alpha-Acetylbenzyl)-4-hydroxycoumarin and salts, when present at concentrations greater than 0.3 percent
ON1108	Zinc cyanide
ON1109	Zinc phosphide, when present at concentrations greater than 10 percent

EAS/gr  
May 3/85  
SCHED2



2B-1

SCHEDULE 2 - O.Reg. 322/85, s.11.  
PART B  
HAZARDOUS WASTE CHEMICALS

<u>NUMBER</u>	<u>NAME OF CHEMICAL</u>
ON2001	Acetaldehyde / Ethyl aldehyde
ON2002	Acetaldehyde, trichloro- / Chloral
ON2003	Acetamide, N-(4-ethoxyphenyl)- / Phenacetin
ON2004	Acetamide, N-9H-fluoren-2-yl- / 2-Acetylaminofluorene
ON2005	Acetic acid, ethyl ester / Ethyl acetate
ON2006	Acetic acid, lead salt / Lead acetate
ON2007	Acetic acid, thallium (I) salt / Thallium (I) acetate
ON2226	Acetone / 2-Propanone
ON2008	Acetonitrile / Methyl cyanide
ON2009	3-(alpha-Acetylbenzyl)-4-hydroxycoumarin and salts, when present at concentrations of 0.3 percent or less / Warfarin, when present at concentrations of 0.3 percent or less
ON2010	Acetophenone / Ethanone, 1-phenyl-
ON2004	2-Acetylaminofluorene / Acetamide, N-9H-fluoren-2-yl-
ON2011	Acetyl chloride / Acetic chloride
ON2012	Acrylamide / Propenamide
ON2013	Acrylic acid / 2-Propenoic acid
ON2014	Acrylonitrile / 2-Propenenitrile
ON2015	Alanine, 3-(p-bis(2-chloroethyl)amino)phenyl-, L- / Melphalan
ON2016	Amitrole / 1H-1,2,4-Triazol-3-amine
ON2017	Aniline / Benzenamine
ON2018	Auramine / Benzenamine, 4,4'-carbonimidoylbis- (N,N-dimethyl-

## 2B-2

<u>NUMBER</u>	<u>NAME OF CHEMICAL</u>
ON2019	Azaserine / L-Serine, diazoacetate (ester)
ON2020	Azirino(2',3':3,4)pyrrolo(1,2a)indole-4,7-dione, 6-amino-8-(((aminocarbonyl)oxy)methyl)- 1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5-methyl- / Mitomycin C
ON2021	Benz(j)aceanthrylene, 1,2-dihydro-3-methyl- / 3-Methylcholanthrene
ON2022	Benz(c)acridine / 3,4-Benzacridine
ON2022	3,4-Benzacridine / Benz(c)acridine
ON2023	Benzal chloride / Benzyldine chloride
ON2024	Benz(a)anthracene / 1,2-Benzanthracene
ON2024	1,2-Benzanthracene / Benz(a)anthracene
ON2025	1,2-Benzanthracene, 7,12-dimethyl- / 9,10-Dimethyl- benz(a)anthracene
ON2017	Benzenamine / Aniline
ON2018	Benzenamine, 4,4'-carbonimidoylbis(N,N-dimethyl- / Auramine
ON2026	Benzenamine, 4-chloro-2-methyl- / 4-Chloro-o-toluidine hydrochloride
ON2027	Benzenamine, N,N'-dimethyl-4-phenylazo- / Dimethylaminoazobenzene
ON2028	Benzenamine, 4,4'-methylenebis(2-chloro- / 4,4'- Methylenebis(2-chloroaniline)
ON2029	Benzenamine, 2-methyl-, hydrochloride / o-Toluidine hydrochloride
ON2030	Benzenamine, 2-methyl-5-nitro- / 5-Nitro-o-toluidine
ON2031	Benzene
ON2032	Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl) -alpha-hydroxy, ethyl ester / Ethyl 4,4'-dichlorobenzilate
ON2033	Benzene, 1-bromo-4-phenoxy- / 4-Bromophenyl phenyl ether
ON2034	Benzene, chloro- / Chlorobenzene

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<u>NUMBER</u>	<u>NAME OF CHEMICAL</u>
ON2035	1,2-Benzenedicarboxylic acid anhydride / Phthalic anhydride
ON2036	1,2-Benzenedicarboxylic acid, (bis(2-ethylhexyl)) ester / Bis(2-ethylhexyl)phthalate
ON2037	1,2-Benzenedicarboxylic acid, dibutyl ester / Dibutyl phthalate
ON2038	1,2-Benzenedicarboxylic acid, diethyl ester / Diethyl phthalate
ON2039	1,2-Benzenedicarboxylic acid, dimethyl ester / Dimethyl phthalate
ON2040	1,2-Benzenedicarboxylic acid, di-n-octyl ester / Di-n-octyl phthalate
ON2041	Benzene, 1,2-dichloro- / o-Dichlorobenzene
ON2042	Benzene, 1,3-dichloro- / m-Dichlorobenzene
ON2043	Benzene, 1,4-dichloro- / p-Dichlorobenzene
ON2023	Benzene, (dichloromethyl)- / Benzal chloride
ON2044	Benzene, 1,3-diisocyanatomethyl- / Toluene diisocyanate
ON2045	Benzene, dimethyl- / Xylene
ON2046	1,3-Benzenediol / Resorcinol
ON2047	Benzene, hexachloro- / Hexachlorobenzene
ON2048	Benzene, hexahydro- / Cyclohexane
ON2049	Benzene, hydroxy- / Phenol
ON2050	Benzene, methyl- / Toluene
ON2051	Benzene, 1-methyl-2,4-dinitro- / 2,4-Dinitrotoluene
ON2052	Benzene, 1-methyl-2,6-dinitro- / 2,6-Dinitrotoluene
ON2053	Benzene, 1,2-methylenedioxy-4-allyl- / Safrole
ON2054	Benzene, 1,2-methylenedioxy-4-propenyl- / Isosafrole
ON2055	Benzene, 1,2-methylenedioxy-4-propyl- / Dihydrosafrole

## 2B-4

<u>NUMBER</u>	<u>NAME OF CHEMICAL</u>
ON2056	Benzene, (1-methylethyl)- / Isopropylbenzene
ON2057	Benzene, nitro- / Nitrobenzene
ON2058	Benzene, pentachloro- / Pentachlorobenzene
ON2059	Benzene, pentachloronitro- / Pentachloronitrobenzene
ON2060	Benzenesulphonic acid chloride / Benzenesulphonyl chloride
ON2060	Benzenesulphonyl chloride / Benzenesulphonic acid chloride
ON2061	Benzene, 1,2,4,5-tetrachloro- / 1,2,4,5-Tetrachlorobenzene
ON2062	Benzene, trichloromethyl- / Benzotrichloride
ON2063	Benzene, 1,3,5-trinitro- / 1,3,5-Trinitrobenzene
ON2064	Benzidine / 4,4'-Diaminobiphenyl
ON2065	1,2-Benzisothiazolin-3-one, 1,1-dioxide and salts / Saccharin and salts
ON2066	Benzo(j,k)fluorene / Fluoranthene
ON2067	Benzo(a)pyrene / 3,4-Benzopyrene
ON2067	3,4-Benzopyrene / Benzo(a)pyrene
ON2068	p-Benzoquinone / Cyclohexadienedione
ON2062	Benzotrichloride / Benzene, trichloromethyl-
ON2069	1,2-Benzphenanthrene / Chrysene
ON2070	2,2'-Bioxirane / D-Threitol, 1,2:3,4-dianhydro-
ON2064	(1,1'-Biphenyl)-4,4'-diamine / Benzidine
ON2071	(1,1'-Biphenyl)-4,4'-diamine, 3,3'-dichloro- / 3,3'-Dichlorobenzidine
ON2072	(1,1'-Biphenyl)-4,4'-diamine, 3,3'-dimethoxy- / 3,3'-Dimethoxybenzidine
ON2073	(1,1'-Biphenyl)-4,4'-diamine, 3,3'-dimethyl- / 3,3'-Dimethylbenzidine

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<u>NUMBER</u>	<u>NAME OF CHEMICAL</u>
ON2074	Bis(2-chloroethoxy)methane / Ethane, 1,1'-(methylene-bis(oxy))bis(2-chloro-
ON2075	Bis(2-chloroisopropyl) ether / Ether, bis(2-chloro-1-methylethyl)
ON2076	Bis(dimethylthiocarbamoyl) disulphide / Thiram
ON2036	Bis(2-ethylhexyl) phthalate / 1,2-Benzenedicarboxylic acid, (bis(2-ethylhexyl)) ester
ON2077	Bromine cyanide / Cyanogen bromide
ON2078	Bromoform / Tribromomethane
ON2033	4-Bromophenyl phenyl ether / Benzene, 1-bromo-4-phenoxy-
ON2079	1,3-Butadiene, 1,1,2,3,4,4-hexachloro- / Hexachloro-butadiene
ON2080	1-Butanamine, N-butyl-N-nitroso- / N-Nitrosodi-n-butylamine
ON2081	Butanoic acid, 4-(bis(2-chloroethyl)amino)benzene- / Chlorambucil
ON2082	1-Butanol / n-Butyl alcohol
ON2083	2-Butanone / Methyl ethyl ketone
ON2084	2-Butanone peroxide / Methyl ethyl ketone peroxide
ON2085	2-Butenal / Crotonaldehyde
ON2086	2-Butene, 1,4-dichloro- / 1,4-Dichloro-2-butene
ON2082	n-Butyl alcohol / 1-Butanol
ON2087	Cacodylic acid / Arsine oxide, dimethylhydroxy-
ON2088	Calcium chromate / Chromic acid, calcium salt
ON2089	Carbamic acid, ethyl ester / Ethyl carbamate (urethane)
ON2090	Carbamic acid, methylnitroso-, ethyl ester / N-Nitroso-N-methylurethane
ON2091	Carbamide, N-ethyl-N-nitroso- / 1-Nitroso-1-ethylurea

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<u>NUMBER</u>	<u>NAME OF CHEMICAL</u>
ON2092	Carbamide, N-methyl-N-nitroso- / 1-Nitroso-1-methylurea
ON2093	Carbamide, thio- / Thiourea
ON2094	Carbamoyl chloride, dimethyl- / Dimethylcarbamoyl chloride
ON2095	Carbonic acid, dithallium (I) salt / Thallium carbonate
ON2096	Carbonochloridic acid, methyl ester / Methyl chloroformate
ON2097	Carbon oxyfluoride / Carbonyl fluoride
ON2098	Carbon tetrachloride / Tetrachloromethane
ON2097	Carbonyl fluoride / Fluorophosgene
ON2002	Chloral / Trichloroacetaldehyde
ON2081	Chlorambucil / Butanoic acid, 4-(bis(2-chloroethyl)- amino)benzene-
ON2099	Chlordane / 4,7-Methanoindan, 1,2,4,5,6,7,8,8- octachloro-3a,4,7,7a-tetrahydro-
ON2100	Chlornaphazine / 2-Naphthylamine, N,N'-bis- (2-chloroethyl)-
ON2034	Chlorobenzene / Benzene, chloro-
ON2101	4-Chloro-m-cresol / 4-Chloro-3-methylphenol
ON2102	1-Chloro-2,3-epoxypropane / Epichlorohydrin
ON2103	2-Chloroethyl vinyl ether / Ethene, 2-chloroethoxy-
ON2104	Chloroform / Trichloromethane
ON2105	Chloromethyl methyl ether / Methylchloromethyl ether
ON2106	beta-Chloronaphthalene / Naphthalene, 2-chloro-
ON2107	o-Chlorophenol / 2-Chlorophenol
ON2026	4-Chloro-o-toluidine hydrochloride / 2-Amino-5- chlorotoluene hydrochloride
ON2088	Chromic acid, calcium salt / Calcium chromate
ON2069	Chrysene / 1,2-Benzphenanthrene

2B-7

<u>NUMBER</u>	<u>NAME OF CHEMICAL</u>
ON2108	Creosote
ON2109	Cresols
ON2110	Cresylic acid
ON2085	Crotonaldehyde / 2-Butenal
ON2056	Cumene / Isopropylbenzene
ON2077	Cyanogen bromide / Bromocyanide
ON2068	1,4-Cyclohexadienedione / Benzoquinone
ON2048	Cyclohexane / Benzene, hexahydro-
ON2111	Cyclohexanone / Anone
ON2112	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro- / Hexachlorocyclopentadiene
ON2113	Cyclophosphamide / 2H-1,3,2-Oxazaphosphorine, 2-(bis(2-chloroethyl)amino)tetrahydro-, oxide 2-
ON2114	2,4-D, salts and esters / 2,4-Dichlorophenoxyacetic acid, salts and esters
ON2115	Daunomycin / 5,12-Naphthacenedione, (8S-cis)-8-acetyl- 10-((3-amino-2,3,6-trideoxy-alpha-L-lyxo-hexo- pyranosyl)oxyl)-7,8,9,10-tetrahydro-6,8,11- trihydroxyl-methoxy-
ON2116	DDD / Dichlorodiphenyldichloroethane
ON2117	DDT / Dichlorodiphenyltrichloroethane
ON2118	Decachlorooctahydro-1,3,4-metheno-2H-cyclobuta(c,d)- pentalen-2-one / Kepone or Chlordecone
ON2119	Diallate / S-(2,3-Dichloroallyl) diisopropylthio- carbamate
ON2120	Diamine / Hydrazine
ON2121	Diaminotoluene / Toluenediamine
ON2122	Dibenz(a,h)anthracene / 1,2,5,6-Dibenzanthracene
ON2122	1,2,5,6-Dibenzanthracene / Dibenz(a,h)anthracene
ON2123	1,2,7,8-Dibenzopyrene / Dibenz(a,i)pyrene

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<u>NUMBER</u>	<u>NAME OF CHEMICAL</u>
ON2123	Dibenz(a,i)pyrene / 1,2,7,8-Dibenzopyrene
ON2124	1,2-Dibromo-3-chloropropane / Propane, 1,2-dibromo-3-chloro-
ON2125	Dibromomethane / Methylene bromide
ON2037	Dibutyl phthalate / 1,2-Benzenedicarboxylic acid, dibutyl ester
ON2119	S-(2,3-Dichloroallyl) diisopropylthiocarbamate / Diallate
ON2041	o-Dichlorobenzene / 1,2-Dichlorobenzene
ON2042	m-Dichlorobenzene / 1,3-Dichlorobenzene
ON2043	p-Dichlorobenzene / 1,4-Dichlorobenzene
ON2071	3,3'-Dichlorobenzidine / (1,1'-Biphenyl)-4,4'-diamine, 3,3'-dichloro-
ON2086	1,4-Dichloro-2-butene / 1,4-Dichlorobutene-2
ON2126	Dichlorodifluoromethane / Methane, dichlorodifluoro-
ON2127	3,5-Dichloro-N-(1,1-dimethyl-2-propynyl) benzamide / Pronamide
ON2116	Dichlorodiphenyldichloroethane / DDD
ON2117	Dichlorodiphenyltrichloroethane / DDT
ON2128	1,1-Dichloroethylene / Ethene, 1,1-dichloro-
ON2129	1,2-Dichloroethylene / Ethene, trans-1,2-dichloro-
ON2130	Dichloroethyl ether / Ether, bis(2-chloroethyl)
ON2131	Dichloromethane / Methylene chloride
ON2132	2,4-Dichlorophenol / Phenol, 2,4-dichloro-
ON2133	2,6-Dichlorophenol / Phenol, 2,6-dichloro-
ON2114	2,4-Dichlorophenoxyacetic acid, salts and esters / 2,4-D, salts and esters
ON2134	1,2-Dichloropropane / Propylene dichloride
ON2135	1,3-Dichloropropene / Propene, 1,3-dichloro-
ON2070	1,2:3,4-Diepoxybutane / 2,2'-Bioxirane



2B-9

<u>NUMBER</u>	<u>NAME OF CHEMICAL</u>
ON2136	1,4-Diethylene dioxide / 1,4-Dioxane
ON2137	Diethyl ether / Ethyl ether
ON2138	N,N-Diethylhydrazine / Hydrazine, 1,2-diethyl-
ON2139	O,O-Diethyl-S-methyl-dithiophosphate / Phosphoro- dithioic acid, O,O-diethyl-, S-methyl ester
ON2038	Diethyl phthalate / 1,2-Benzenedicarboxylic acid, diethyl ester
ON2140	Diethylstilbestrol / 4,4'-Stilbenediol, alpha,alpha'-diethyl-
ON2141	1,2-Dihydro-3,6-pyridazinedione / Maleic hydrazide
ON2055	Dihydrosafrole / Benzene, 1,2-methylenedioxy- 4-propyl-
ON2072	3,3'-Dimethoxybenzidine / (1,1'-Biphenyl)-4,4'-diamine, 3,3'-dimethoxy-
ON2142	Dimethylamine / Methanamine, N-methyl-
ON2027	Dimethylaminoazobenzene / Benzenamine, N,N'-dimethyl-4-phenylazo-
ON2025	7,12-Dimethylbenz(a)anthracene / 1,2-Benzanthracene, 9,10-dimethyl-
ON2073	3,3'-Dimethylbenzidine / (1,1'-Biphenyl)-4,4'-diamine, 3,3'-dimethyl-
ON2143	alpha, alpha-Dimethylbenzylhydroperoxide / Cumene hydroperoxide
ON2094	Dimethylcarbamoyl chloride / Carbamoyl chloride, dimethyl-
ON2144	1,1-Dimethylhydrazine / Hydrazine, 1,1-dimethyl-
ON2145	1,2-Dimethylhydrazine / Hydrazine, 1,2-dimethyl-
ON2146	2,4-Dimethylphenol / Xylenol
ON2039	Dimethyl phthalate / 1,2-Benzenedicarboxylic acid, dimethyl ester
ON2147	Dimethyl sulphate / Sulphuric acid, dimethyl ester
ON2051	2,4-Dinitrotoluene / Benzene, 1-methyl-2,4-dinitro-

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<u>NUMBER</u>	<u>NAME OF CHEMICAL</u>
ON2052	2,6-Dinitrotoluene / Benzene, 1-methyl-2,6-dinitro-
ON2040	Di-n-octyl phthalate / 1,2-Benzenedicarboxylic acid, di-n-octyl ester
ON2136	1,4-Dioxane / 1,4-Diethylene dioxide
ON2148	1,2-Diphenylhydrazine / Hydrazine, 1,2-diphenyl-
ON2149	Dipropylamine / 1-Propanamine, N-propyl-
ON2150	Di-N-propylnitrosamine / N-Nitroso-N-dipropylamine
ON2102	Epichlorohydrin / ECH
ON2001	Ethanal / Acetaldehyde
ON2151	Ethanamine, N-ethyl-N-nitroso- / N-Nitrosodiethylamine
ON2152	Ethane, 1,2-dibromo- / Ethylene dibromide
ON2153	Ethane, 1,1-dichloro- / 1,1-Dichloroethane
ON2154	Ethane, 1,2-dichloro- / Ethylene dichloride
ON2155	1,2-Ethanediylobiscarbamodithioic acid / Ethylenebis- (dithiocarbamic acid)
ON2156	Ethane, 1,1,1,2,2,2-hexachloro- / Hexachloroethane
ON2074	Ethane, 1,1'-(methylenebis(oxy))bis(2-chloro- / Bis- (2-chloroethoxy)methane
ON2008	Ethanenitrile / Acetonitrile
ON2137	Ethane, 1,1'-oxybis- / Diethyl ether
ON2130	Ethane, 1,1'-oxybis(2-chloro- / Dichloroethyl ether
ON2157	Ethane, pentachloro- / Pentachloroethane
ON2158	Ethane, 1,1,1,2-tetrachloro- / 1,1,1,2-Tetrachloroethane
ON2159	Ethane, 1,1,2,2-tetrachloro- / 1,1,2,2-Tetrachloroethane
ON2160	Ethanethioamide / Thioacetamide
ON2161	Ethane, 1,1,1-trichloro- / 1,1,1-Trichloroethane
ON2162	Ethane, 1,1,2-trichloro- / 1,1,2-Trichloroethane

2B-11

<u>NUMBER</u>	<u>NAME OF CHEMICAL</u>
ON2163	Ethane, 1,1,1-trichloro-2,2-bis(p-methoxyphenyl- / Methoxychlor
ON2164	Ethanol, 2,2'(nitrosoimino)bis- / N-Nitrosodi- ethanolamine
ON2010	Ethanone, 1-phenyl- / Acetophenone
ON2011	Ethanoyl chloride / Acetyl chloride
ON2165	Ethene, chloro- / Vinyl chloride
ON2103	Ethene, 2-chloroethoxy- / 2-Chloroethyl vinyl ether
ON2128	Ethene, 1,1-dichloro- / 1,1-Dichloroethylene
ON2129	Ethene, trans-1,2-dichloro- / 1,2-Dichloroethylene
ON2166	Ethene, 1,1,2,2-tetrachloro- / Tetrachloroethylene or Perchloroethylene
ON2005	Ethyl acetate / Acetic acid, ethyl ester
ON2167	Ethyl acrylate / 2-Propenoic acid, ethyl ester
ON2089	Ethyl carbamate (urethane) / Carbamic acid, ethyl ester
ON2032	Ethyl 4,4'-dichlorobenzilate / Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy, ethyl ester
ON2155	Ethylenebis(dithiocarbamic acid) / 1,2-Ethanediylobis- carbamodithioic acid
ON2152	Ethylene dibromide / Ethane, 1,2-dibromo-
ON2154	Ethylene dichloride / Ethane, 1,2-dichloro-
ON2168	Ethylene oxide / Oxirane
ON2169	Ethylene thiourea / 2-Imidazolidinethione
ON2137	Ethyl ether / Diethyl ether
ON2153	Ethylidene dichloride / 1,1-Dichloroethane
ON2170	Ethyl methacrylate / Methacrylic acid, ethyl ester
ON2171	Ethyl methanesulphonate / Methanesulphonic acid, ethyl ester
ON2083	Ethyl methyl ketone / Methyl ethyl ketone

2B-12

<u>NUMBER</u>	<u>NAME OF CHEMICAL</u>
ON2172	Ferric dextran / Iron dextran
ON2066	Fluoranthene / Benzo(j,k)fluorene
ON2173	Formaldehyde / Methylene oxide
ON2174	Formic acid / Methanoic acid
ON2175	Furan / Furfuran
ON2176	2-Furancarboxaldehyde / Furfural
ON2177	2,5-Furandione / Maleic anhydride
ON2178	Furan, tetrahydro- / Tetrahydrofuran
ON2176	Furfural / Furfuraldehyde
ON2175	Furfuran / Furan
ON2179	D-Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoureido)- / Streptozotocin
ON2180	Glycidylaldehyde / Glycidaldehyde
ON2181	Guanidine, N-nitroso-N-methyl-N'-nitro- / N-Methyl-N'- nitro-N-nitrosoguanidine
ON2047	Hexachlorobenzene / Benzene, hexachloro-
ON2079	Hexachlorobutadiene / 1,3-Butadiene, 1,1,2,3,4,4-hexachloro-
ON2182	Hexachlorocyclohexane (gamma isomer) / Lindane
ON2112	Hexachlorocyclopentadiene / 1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-
ON2156	Hexachloroethane / Ethane, hexachloro-
ON2183	Hexachlorophene / 2,2'-Methylenebis- (3,4,6-trichlorophenol)
ON2184	Hexachloropropene / Hexachloropropylene
ON2120	Hydrazine / Diamine
ON2138	Hydrazine, 1,2-diethyl- / N,N-Diethylhydrazine
ON2144	Hydrazine, 1,1-dimethyl- / 1,1-Dimethylhydrazine
ON2145	Hydrazine, 1,2-dimethyl- / 1,2-Dimethylhydrazine

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<u>NUMBER</u>	<u>NAME OF CHEMICAL</u>
ON2148	Hydrazine, 1,2-diphenyl- / 1,2-Diphenylhydrazine
ON2185	Hydrofluoric acid
ON2186	Hydrogen fluoride
ON2187	Hydrogen sulphide / Sulphur hydride
ON2143	Hydroperoxide, 1-methyl-1-phenylethyl- / alpha,alpha-Dimethylbenzylhydroperoxide
ON2087	Hydroxydimethylarsine oxide / Cacodylic acid
ON2169	2-Imidazolidinethione / Ethylene thiourea
ON2188	Indeno(1,2,3-cd)pyrene / 2,3-Phenylene pyrene
ON2172	Iron dextran / Imferon
ON2189	Isobutyl alcohol / Isobutanol
ON2056	Isopropylbenzene / Benzene, (1-methylethyl)-
ON2054	Isosafrole / Benzene, 1,2-methylenedioxy-4-propenyl-
ON2118	Kepone / Chlordecone
ON2190	Lasiocarpine / 2-Methyl-2-butenic acid 7-((2,3-dihydroxy-2-(1-methoxyethyl)-3-methyl-1-oxobutoxy)methyl)-2,3,5,7a-tetrahydro-1H-pyrrolizin-1-yl ester
ON2006	Lead acetate / Acetic acid, lead salt
ON2191	Lead phosphate / Phosphoric acid, lead salt
ON2192	Lead subacetate / Monobasic lead acetate
ON2182	Lindane / gamma-Benzene hexachloride
ON2177	Maleic anhydride / 2,5-Furandione
ON2141	Maleic hydrazide / 1,2-Dihydro-3,6-pyridazinedione
ON2193	Malononitrile / Malonic dinitrile
ON2015	Melphalan / Alanine, 3-(p-bis(2-chloroethyl)amino)-phenyl-, L-
ON2194	Mercury
ON2195	Methacrylonitrile / 2-Propenenitrile, 2-methyl-

2B-14

<u>NUMBER</u>	<u>NAME OF CHEMICAL</u>
ON2142	Methanamine, N-methyl- / Dimethylamine
ON2196	Methane, bromo- / Methyl bromide
ON2197	Methane, chloro- / Methyl chloride
ON2105	Methane, chloromethoxy- / Methylchloromethyl ether
ON2125	Methane, dibromo- / Dibromomethane
ON2131	Methane, dichloro- / Dichloromethane
ON2126	Methane, dichlorodifluoro- / Dichlorodifluoromethane
ON2198	Methane, iodo- / Methyl iodide
ON2171	Methanesulphonic acid, ethyl ester / Ethyl methanesulphonate
ON2098	Methane, tetrachloro- / Carbon tetrachloride
ON2199	Methanethiol / Methyl mercaptan
ON2078	Methane, tribromo- / Bromoform
ON2104	Methane, trichloro- / Chloroform
ON2200	Methane, trichlorofluoro- / Trichlorofluoromethane
ON2174	Methanoic acid / Formic acid
ON2099	4,7-Methanoindan, 1,2,4,5,6,7,8,8-octachloro- 3a,4,7,7a-tetrahydro- / Chlordane
ON2201	Methanol / Methyl alcohol
ON2202	Methapyrilene / Pyridine, 2-((2-(dimethylamino)ethyl)- 2-thenylamino)-
ON2163	Methoxychlor / Ethane, 1,1,1-trichloro-2,2-bis(p- methoxyphenyl)-
ON2201	Methyl alcohol / Methanol
ON2196	Methyl bromide / Methane, bromo-
ON2203	1-Methylbutadiene / 1,3-Pentadiene
ON2197	Methyl chloride / Methane, chloro-
ON2096	Methyl chlorocarbonate / Methyl chloroformate

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<u>NUMBER</u>	<u>NAME OF CHEMICAL</u>
ON2161	Methylchloroform / 1,1,1-Trichloroethane
ON2096	Methyl chloroformate / Methyl chlorocarbonate
ON2105	Methyl chloromethyl ether / Chloromethyl methyl ether
ON2021	3-Methylcholanthrene / Benz(j)aceanthrylene, 1,2-dihydro-3-methyl-
ON2008	Methyl cyanide / Acetonitrile
ON2028	4,4'-Methylenebis(2-chloroaniline) / Benzenamine, 4,4'- -methylenebis(2-chloro-
ON2183	2,2'-Methylenebis(3,4,6-trichlorophenol) / Hexa- chlorophene
ON2125	Methylene bromide / Dibromomethane
ON2131	Methylene chloride / Dichloromethane
ON2173	Methylene oxide / Formaldehyde
ON2083	Methyl ethyl ketone / Ethyl methyl ketone
ON2084	Methyl ethyl ketone peroxide / Ethyl methyl ketone peroxide
ON2198	Methyl iodide / Methane, iodo-
ON2204	Methyl isobutyl ketone / MIBK
ON2199	Methyl mercaptan / Methanethiol
ON2205	Methyl methacrylate / 2-Propenoic acid, 2-methyl-, methyl ester
ON2181	N-Methyl-N'-nitro-N-nitrosoguanidine / Guanidine, N-nitroso-N-methyl-N'nitro-
ON2204	4-Methyl-2-pentanone / Methyl isobutyl ketone
ON2206	Methylthiouracil / 4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-
ON2020	Mitomycin C / Azirino(2',3':3,4)pyrrolo(1,2a)- indole-4,7-dione, 6-amino-8-(((aminocarbonyl)oxy)- methyl)-1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5- methyl-

2B-16

<u>NUMBER</u>	<u>NAME OF CHEMICAL</u>
ON2115	5,12-Naphthacenedione, (8S-cis)-8-acetyl-10-((3-amino-2,3,6-trideoxy-alpha-L-lyxo-hexopyranosyl)oxyl)-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy- / Daunomycin
ON2207	Naphthalene
ON2106	Naphthalene, 2-chloro- / beta-Chloronaphthalene
ON2208	1,4-Naphthalenedione / 1,4-Naphthoquinone
ON2209	2,7-Naphthalenedisulphonic acid, 3,3'-((3,3'-dimethyl-4,4'-biphenylene)bis(azo))bis(5-amino-4-hydroxy-, tetrasodium salt / Trypan Blue
ON2208	1,4-Naphthoquinone / 1,4-Naphthalenedione
ON2210	1-Naphthylamine / alpha-Naphthylamine
ON2211	2-Naphthylamine / beta-Naphthylamine
ON2210	alpha-Naphthylamine / 1-Naphthylamine
ON2211	beta-Naphthylamine / 2-Naphthylamine
ON2100	2-Naphthylamine, N,N'-bis(2-chloroethyl)- / Chlornaphazine
ON2057	Nitrobenzene / Benzene, nitro-
ON2212	p-Nitrophenol / 4-Nitrophenol
ON2213	2-Nitropropane / Propane, 2-nitro-
ON2080	N-Nitrosodi-n-butylamine / 1-Butanamine, N-butyl-N-nitroso-
ON2164	N-Nitrosodiethanolamine / Ethanol, N-nitrosoiminodi-
ON2151	N-Nitrosodiethylamine / Ethanamine, N-ethyl-N-nitroso-
ON2150	N-Nitroso-N-propylamine / Di-N-propylnitrosamine
ON2091	N-Nitroso-N-ethylurea / N-Ethyl-N-nitrosocarbamide
ON2092	N-Nitroso-N-methylurea / N-Methyl-N-nitrosocarbamide
ON2090	N-Nitroso-N-methylurethane / Carbamic acid, methylnitroso-, ethyl ester
ON2214	N-Nitrosopiperidine / Pyridine, hexahydro-N-nitroso-



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<u>NUMBER</u>	<u>NAME OF CHEMICAL</u>
ON2215	N-Nitrosopyrrolidine / Pyrrole, tetrahydro-N-nitroso-
ON2030	5-Nitro-o-toluidine / Benzenamine, 2-methyl-5-nitro-
ON2216	1,2-Oxathiolane 2,2-dioxide / 1,3-Propane sultone
ON2113	2H-1,3,2-Oxazaphosphorine, 2-(bis(2-chloroethyl)amino)- tetrahydro-, oxide 2- / Cyclophosphamide
ON2168	Oxirane / Ethylene oxide
ON2102	Oxirane, 2-(chloromethyl)- / Epichlorohydrin
ON2217	Paraldehyde / s-Trioxane, 2,4,6-trimethyl-
ON2058	Pentachlorobenzene / Benzene, pentachloro-
ON2157	Pentachloroethane / Ethane, pentachloro-
ON2059	Pentachloronitrobenzene / Benzene, pentachloronitro-
ON2218	Pentachlorophenol / Phenol, pentachloro-
ON2203	1,3-Pentadiene / Piperylene
ON2003	Phenacetin / N-(4-Ethoxyphenyl)acetamide
ON2049	Phenol / Hydroxybenzene
ON2107	Phenol, 2-chloro- / o-Chlorophenol
ON2101	Phenol, 4-chloro-3-methyl- / 4-Chloro-m-cresol
ON2132	Phenol, 2,4-dichloro- / 2,4-Dichlorophenol
ON2133	Phenol, 2,6-dichloro- / 2,6-Dichlorophenol
ON2146	Phenol, 2,4-dimethyl- / Xylenol
ON2212	Phenol, 4-nitro- / p-Nitrophenol
ON2218	Phenol, pentachloro- / Pentachlorophenol
ON2219	Phenol, 2,3,4,6-tetrachloro- / 2,3,4,6-Tetrachlorophenol
ON2220	Phenol, 2,4,5-trichloro- / 2,4,5-Trichlorophenol
ON2221	Phenol, 2,4,6-trichloro- / 2,4,6-Trichlorophenol
ON2188	2,3-Phenylenepyrene / Indeno(1,2,3-cd)pyrene

2B-18

<u>NUMBER</u>	<u>NAME OF CHEMICAL</u>
ON2191	Phosphoric acid, lead salt / Lead phosphate
ON2139	Phosphorodithioic acid, O,O-diethyl-, S-methyl ester / O,O-Diethyl-S-methyl-dithiophosphate
ON2222	Phosphorus sulphide / Phosphorus pentasulphide
ON2035	Phthalic anhydride / 1,2-Benzenedicarboxylic acid anhydride
ON2223	2-Picoline / 2-Methylpyridine
ON2127	Pronamide / 3,5-Dichloro-N-(1,1-dimethyl-2-propynyl) benzamide
ON2224	1-Propanamine / n-Propylamine
ON2149	1-Propanamine, N-propyl- / Dipropylamine
ON2124	Propane, 1,2-dibromo-3-chloro- / 1,2-Dibromo-3- chloropropane
ON2193	Propanedinitrile / Malononitrile
ON2213	Propane, 2-nitro- / 2-Nitropropane
ON2075	Propane, 2,2'-oxybis(2-chloro- / Bis(2-chloroisopropyl) ether
ON2216	1,3-Propane sultone / 1,2-Oxathiolane, 2,2-dioxide
ON2225	1-Propanol, 2,3-dibromo-, phosphate (3:1) / Tris- (2,3-dibromopropyl) phosphate
ON2180	1-Propanol, 2,3-epoxy- / Glycidaldehyde
ON2189	1-Propanol, 2-methyl- / Isobutanol
ON2226	2-Propanone / Acetone
ON2012	2-Propenamide / Acrylamide
ON2135	Propene, 1,3-dichloro- / 1,3-Dichloropropene
ON2184	1-Propene, 1,1,2,3,3,3-hexachloro- / Hexachloropropene
ON2014	2-Propenenitrile / Acrylonitrile
ON2195	2-Propenenitrile, 2-methyl- / Methacrylonitrile
ON2013	2-Propenoic acid / Acrylic acid

2B-19

<u>NUMBER</u>	<u>NAME OF CHEMICAL</u>
ON2167	2-Propenoic acid, ethyl ester / Ethyl acrylate
ON2170	2-Propenoic acid, 2-methyl-, ethyl ester / Ethyl methacrylate
ON2205	2-Propenoic acid, 2-methyl-, methyl ester / Methyl methacrylate
ON2227	Propionic acid, 2-(2,4,5-trichlorophenoxy)- / Silvex
ON2224	n-Propylamine / 1-Propanamine
ON2134	Propylene dichloride / 1,2-Dichloropropane
ON2228	Pyridine / Azabenzene
ON2202	Pyridine, 2-((2-(dimethylamino)ethyl)-2-thenylamino)- / Methapyrilene
ON2214	Pyridine, hexahydro-N-nitroso- / N-Nitrosopiperidine
ON2223	Pyridine, 2-methyl- / 2-Picoline
ON2206	4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo- / Methylthiouracil
ON2215	Pyrrole, tetrahydro-N-nitroso- / N-Nitrosopyrrolidine
ON2229	Reserpine / 3,4,5-Trimethoxybenzoyl methyl reserpate
ON2046	Resorcinol / 1,3-Benzenediol
ON2065	Saccharin and salts / 1,2-Benzisothiazolin-3-one, 1,1-dioxide and salts
ON2055	Safrole / Benzene, 1,2-methylenedioxy-4-allyl-
ON2230	Selenious acid / Monohydrated selenium dioxide
ON2231	Selenium dioxide / Selenium oxide
ON2232	Selenium disulphide / Sulphur selenide
ON2019	L-Serine, diazoacetate (ester) / Azaserine
ON2227	Silvex / Propionic acid, 2-(2,4,5-trichlorophenoxy)-
ON2140	4,4'-Stilbenediol, alpha,alpha'-diethyl- / Diethylstilbestrol
ON2179	Streptozotocin / D-Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoureido)-

## 2B-20

<u>NUMBER</u>	<u>NAME OF CHEMICAL</u>
ON2187	Sulphur hydride / Hydrogen sulphide
ON2147	Sulphuric acid, dimethyl ester / Dimethyl sulphate
ON2222	Sulphur phosphide / Phosphorus pentasulphide
ON2232	Sulphur selenide / Selenium disulphide
ON2233	2,4,5-T / 2,4,5-Trichlorophenoxyacetic acid
ON2061	1,2,4,5-Tetrachlorobenzene / Benzene, 1,2,4,5-tetrachloro-
ON2158	1,1,1,2-Tetrachloroethane / Ethane, 1,1,1,2-tetrachloro-
ON2159	1,1,2,2-Tetrachloroethane / Ethane, 1,1,2,2-tetrachloro-
ON2166	Tetrachloroethylene / Perchloroethylene
ON2219	2,3,4,6-Tetrachlorophenol / Phenol, 2,3,4,6-tetrachloro-
ON2178	Tetrahydrofuran / Oxolane
ON2007	Thallium (I) acetate / Acetic acid, thallium (I) salt
ON2095	Thallium (I) carbonate / Carbonic acid, dithallium (I) salt
ON2234	Thallium (I) chloride / Thallous chloride
ON2235	Thallium (I) nitrate / Thallous nitrate
ON2160	Thioacetamide / Ethanethioamide
ON2199	Thiomethanol / Methyl mercaptan
ON2093	Thiourea / Thiocarbamide
ON2076	Thiram / Bis(dimethylthiocarbamoyl) disulphide
ON2050	Toluene / Methylbenzene
ON2121	Toluenediamine / Diaminotoluene
ON2044	Toluene diisocyanate / Benzene, 2,4-diisocyanato- 1-methyl-
ON2029	O-Toluidine hydrochloride / Benzenamine, 2-methyl-, hydrochloride

2B-21

<u>NUMBER</u>	<u>NAME OF CHEMICAL</u>
ON2016	1H-1,2,4-Triazol-3-amine / Amitrole
ON2161	1,1,1-Trichloroethane / Ethane, 1,1,1-trichloro-
ON2162	1,1,2-Trichloroethane / Ethane, 1,1,2-trichloro-
ON2236	Trichloroethene / Trichloroethylene
ON2236	Trichloroethylene / Trichloroethene
ON2200	Trichloromonofluoromethane / Trichlorofluoromethane
ON2220	2,4,5-Trichlorophenol / Phenol, 2,4,5-trichloro-
ON2221	2,4,6-Trichlorophenol / Phenol, 2,4,6-trichloro-
ON2233	2,4,5-Trichlorophenoxyacetic acid / 2,4,5-T
ON2063	sym-Trinitrobenzene / 1,3,5-Trinitrobenzene
ON2217	1,3,5-Trioxane, 2,4,6-trimethyl- / Paraldehyde
ON2225	Tris(2,3-dibromopropyl) phosphate / 1-Propanol, 2,3-dibromo-, phosphate
ON2209	Trypan blue / 2,7-Naphthalenedisulphonic acid, 3,3'-((3,3'-dimethyl-4,4'-biphenylene)bis(azo))- bis(5-amino-4-hydroxy-, tetrasodium salt
ON2237	Uracil, 5-(bis(2-chloroethyl)amino)- / Uracil mustard
ON2237	Uracil mustard / Uracil, 5-(bis(2-chloroethyl)amino)-
ON2165	Vinyl chloride / Ethene, chloro-
ON2009	Warfarin, when present at concentrations of 0.3 percent or less / 3-(alpha-Acetylbenzyl)-4-hydroxy- coumarin and salts, when present at concentrations of 0.3 percent or less
ON2045	Xylene / Dimethylbenzene
ON2146	Xylenol / 2,4-Dimethylphenol
ON2229	Yohimban-16-carboxylic acid, 11,17-dimethoxy-18- ((3,4,5-trimethoxybenzoyl)oxyl)-, methyl ester / Reserpine
ON2238	Zinc phosphide, when present at concentrations of 10 percent or less

SCHEDULE 2E - O.Reg. 322/85, s.11.

EXEMPT ACUTE HAZARDOUS WASTE CHEMICALS

EXEMPT HAZARDOUS WASTE CHEMICALS

(There are no wastes currently listed in this Schedule)

SCHEDULE 3 - O.Reg. 322/85, s.11.SEVERELY TOXIC CONTAMINANTS

<u>Number</u>	<u>Contaminant</u>
ON3001	Aflatoxin
ON3002	2,3,7,8-Tetrachlorodibenzo-p-dioxin
ON3003	1,2,3,7,8-Pentachlorodibenzo-p-dioxin
ON3004	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
ON3005	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin
ON3006	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
ON3007	2,3,7,8-Tetrachlorodibenzo furan

SCHEDULE 4 - O. Reg. 322/85, s.11.LEACHATE QUALITY CRITERIA

<u>Number</u>	<u>Contaminant</u>	<u>Concentration (milligrams per litre)</u>
ON4001	2,4,5-TP / Silvex / 2-(2,4,5-Trichlorophenoxy) propionic acid	0.01
ON4002	2,4-D	0.1
ON4003	Aldrin + Dieldrin	0.0007
ON4004	Arsenic	0.05
ON4005	Barium	1.0
ON4006	Boron	5.0
ON4007	Cadmium	0.005
ON4008	Carbaryl / 1-Naphthyl-N-methyl carbamate / Sevin	0.07
ON4009	Chlordane	0.007
ON4010	Chromium	0.05
ON4011	Cyanide (free)	0.2
ON4012	DDT	0.03
ON4013	Diazinon / Phosphordithioic acid, O,O-diethyl O-(2-isopropyl- 6-methyl-4-pyrimidinyl) ester	0.0002
ON4014	Endrin	0.0002
ON4015	Fluoride	2.4
ON4016	Heptachlor + Heptachlor epoxide	0.003
ON4017	Lead	0.05



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ON4018	Lindane	0.004
ON4019	Mercury	0.001
ON4020	Methoxychlor / 1,1,1-Trichloro-2, 2-bis(p-methoxyphenyl)ethane	0.1
ON4021	Methyl Parathion	0.007
ON4022	Nitrate + Nitrite	10.0
ON4023	Nitrilotriacetic acid	0.05
ON4024	Nitrite	1.0
ON4025	PCBs	0.003
ON4026	Parathion	0.035
ON4027	Selenium	0.01
ON4028	Silver	0.05
ON4029	Toxaphene	0.005
ON4030	Trihalomethanes	0.35
ON4031	Uranium	0.02

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May 8/85  
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## LEACHATE EXTRACTION PROCEDURE

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### (1) Sampling

Collect a sufficient amount of sample to provide approximately 100 g of solid material, using techniques which ensure that the sample is representative of the waste.

### (2) Equipment

- 2.1 Sieve, 9.5 mm mesh opening, stainless steel or plastic material.
- 2.2 Stainless steel filtration unit, 142 mm diameter, minimum 1L capacity, capable of sustaining a pressure of 5 kg/cm<sup>2</sup>, applied to the solution to be filtered.
- 2.3 Membrane filter, 142 mm diameter, 0.45 µm diameter pore size, made of synthetic organic material such as cellulose acetate, cellulose nitrate, nylon or polycarbonate and which is compatible with the leachate to be filtered. Teflon is recommended for organic constituents.
- 2.4 Glass fibre prefilter, 124 mm diameter, 3 µm to 12 µm pore size range.
- 2.5 Vacuum filtration unit, 90 mm diameter.
- 2.6 Membrane filter 90 mm diameter as per Step 2.3.
- 2.7 Glass fibre filter 70 mm diameter as per Step 2.4.
- 2.8 Solid waste rotary extractor - a device that rotates the bottles end over end about a central axis through 360°, with a speed of 10 rpm. The dimensions of the box will depend on the needs of each laboratory. (Figure 1).
- 2.9 Structural Integrity Tester with a 3.18 cm diameter hammer weighing 0.33 kilogram and having a free fall of 15.24 cm. (Figure 2).
- 2.10 pH meter, with a readability of 0.01 pH unit and accuracy of ± 0.1 pH units.
- 2.11 Cylindrical bottles, wide mouth, 1250 mL capacity, polyethylene or glass with Teflon lined cap for inorganic constituents; glass with Teflon-lined cap or Teflon bottles for organic constituents.
- 2.12 Cleaning Procedure

All glassware and equipment that comes into contact with the sample should be cleaned in the following way before each use:

- 2.12.1 Wash with a non-phosphate detergent solution.

- 2.12.2 Rinse twice with tap water.
- 2.12.3 Rinse twice with reagent water.
- 2.12.4 Wash with 10% nitric acid.
- 2.12.5 Rinse several times with reagent water.
- 2.12.6 Store bottles filled with 10% nitric acid, until ready to use.
- 2.12.7 Rinse several times with reagent water before use.
- 2.12.8 Rinse clean oven dried bottles with methylene chloride, followed by methanol, for organic constituents.

(3) Reagents

- 3.1 Acetic acid, 0.5 N. Dilute 29.4 mL of concentrated acetic acid (ACS grade) to 1000 mL with reagent water.
- 3.2 Reagent water, Type IV (ASTM Specification D 1193). For organic parameters, the reagent water should be free of any organic substances to be analyzed (ASTM Type 1).
- 3.3 Nitric acid, 10% (v/v). Add 100 mL of concentrated nitric acid (ACS grade) to 900 mL of reagent water.
- 3.4 Nitrogen gas, pre-purified, scrubbed through a molecular sieve.

(4) Separation Procedure

If the sample contains a distinct liquid and a solid phase, separate it into its component phases using the following procedure:

- 4.1 Determine the dry weight of the solids in the sample at 60 °C, using a well homogenised sample. Use this weight to determine the amount of material to be filtered.
- 4.2 Assemble the filtration unit with a filter bed consisting of a 0.45 µm pore size membrane filter and a coarse glass fibre pre-filter upstream of the membrane filter (per manufacturer's instructions).
- 4.3 Select one or more blank filters from each batch of filters. Filter 50 mL portions of reagent water through each test filter and analyze the filtrate for the analytical parameters of interest. Note the volume required to reduce the blank values to acceptable levels.
- 4.4 Wash each filter used in the leach procedure with at least this pre-determined volume of water. Filter under pressure until no water flows through the filtrate outlet.
- 4.5 Remove the moist filter bed from the filtration unit and determine its weight to the nearest  $\pm 0.01$  g.

- 4.6 Re-assemble the filtration unit, replacing the filter bed, as before.
- 4.7 Comminute the sample, with a mortar and pestle, to a size that will pass through the opening of the filtration unit (less than 9.5 mm).
- 4.8 Agitate the sample by hand and pour a representative aliquot of the solid and liquid phases into the opening of the filtration unit. Filter a sufficient amount of the sample to provide at least 60 g of dry solid material.
- 4.9 Pressurize the reservoir very slowly with nitrogen gas by means of the regulating valve on the nitrogen gas cylinder, until liquid begins to flow freely from the filtrate outlet.
- 4.10 Increase the pressure step-wise in increments of 0.5 kg/sq. cm to a maximum of 5 kg/sq. cm, as the flow diminishes. Continue filtration until the liquid flow ceases or the pressurizing gas begins to exit from the filtrate outlet of the filter unit.
- 4.11 De-pressurize the filtration unit slowly using the release valve on the filtration unit. Remove and weigh the solid material together with the filter bed to  $\pm 0.01$  g. Record the weight of the solid material.
- 4.12 Measure and record the volume and pH of the liquid phase. Store the liquid at 4 °C under nitrogen until required in Step 5.13.
- 4.13 Discard the solid portion, if the weight is less than 0.5% (w/v) of the aliquot taken. If not, proceed to Step 5.1.

*Note: For mixtures containing coarse grained solids, where separation can be performed without imposing a 5 kg/sq. cm differential pressure, a vacuum filtration unit with a filter bed as per Step 4.2 may be used. Vacuum filtration must not be used, if volatile organic compounds are to be analysed.*

(5) Extraction Procedure

- 5.1 Prepare a solid sample for extraction by crushing, cutting or grinding, to pass through a 9.5 mm mesh sieve. If the original sample contains both liquid and solid phases, use the solid material from Step 4.13. The structural integrity procedure, Step 6, should be used for monolithic wastes which are expected to maintain their structural integrity in a landfill, (e.g. some slags and treated solidified wastes).

*Note: Do not allow the solid waste material to dry prior to the extraction step.*

- 5.2 Determine the moisture content of the de-watered sample, by drying a suitable aliquot to constant weight at 60 °C in an oven. Discard the dried solid material.
- 5.3 Place the equivalent of 50 g dry weight of the de-watered undried material into a 1250 mL wide mouth cylindrical bottle. Use additional bottles, if a larger volume of leachate is required for the analysis.

- 5.4 Add 800 mL (less the moisture content of the sample in mL) of reagent water to the bottle.
- 5.5 Cap the bottle and agitate it in the rotary extractor for 15 minutes before pH measurement.
- 5.6 Measure and record the pH of the solution in the bottle using a pH meter, calibrated with buffers at pH 7.00 and pH 4.00. The solution should be stirred during the pH measurement.
- 5.7 Proceed to Step 5.10.1, if the pH is less than 5.2.
- 5.8 Add a sufficient volume of 0.5N acetic acid if the pH is greater than 5.2 to bring the pH to  $5.0 \pm 0.2$ .

*Note: Maximum Amount of Acid: No more than 4 mL of 0.5N acetic acid per gram of dry weight of sample may be added during the entire procedure. If the pH is not lowered to  $5.0 \pm 0.2$  with this amount, proceed with the extraction.*

- 5.9 Cap the bottle and place it in the tumbling apparatus. Rotate the bottle and its contents at 10 rpm for 24 hours at room temperature (20 °C to 25 °C).
- 5.10 Monitor, and manually adjust the pH during the course of the extraction, if it is greater than  $5.0 \pm 0.2$ . The following procedure should be carefully followed:
  - 5.10.1 Measure the pH of the solution after 1 hour, 3 hours and 6 hours from the starting time. If the pH is above 5.2, reduce it to  $5.0 \pm 0.2$  by addition of 0.5N acetic acid. If the pH is below  $5.0 \pm 0.2$ , do not make any adjustments.
  - 5.10.2 Adjust the volume of the solution to 1000 mL with reagent water, if the pH is below  $5.0 \pm 0.2$  after 6 hours.
  - 5.10.3 Measure and reduce the pH to  $5.0 \pm 0.2$ , if required, after 22 hours and continue the extraction for an additional 2 hours.
- 5.11 Add enough reagent water at the end of the extraction period so that the total volume of liquid is 1000 mL. Record the amount of acid added and the final pH of the solution.
- 5.12 Separate the material into its component liquid and solid phases as described under the Separation Procedure, Step 4. Discard the solid portion.

*Note: It may be necessary to centrifuge the suspension at high speed before filtration, for leachates containing very fine grained particles.*
- 5.13 Calculate the amount of free liquid from Step 4.12 corresponding to 50 g of the dry solid material. Add this amount to the leachate from Step 5.12.

*Note: If the analysis is not performed immediately, store separate aliquots of the leachate at 4 °C, after adding appropriate preservatives for the analytical parameters of interest (See "A Guide to the Collection and Submission of Samples for Laboratory Analysis", Ontario Ministry of the Environment, July 1979).*

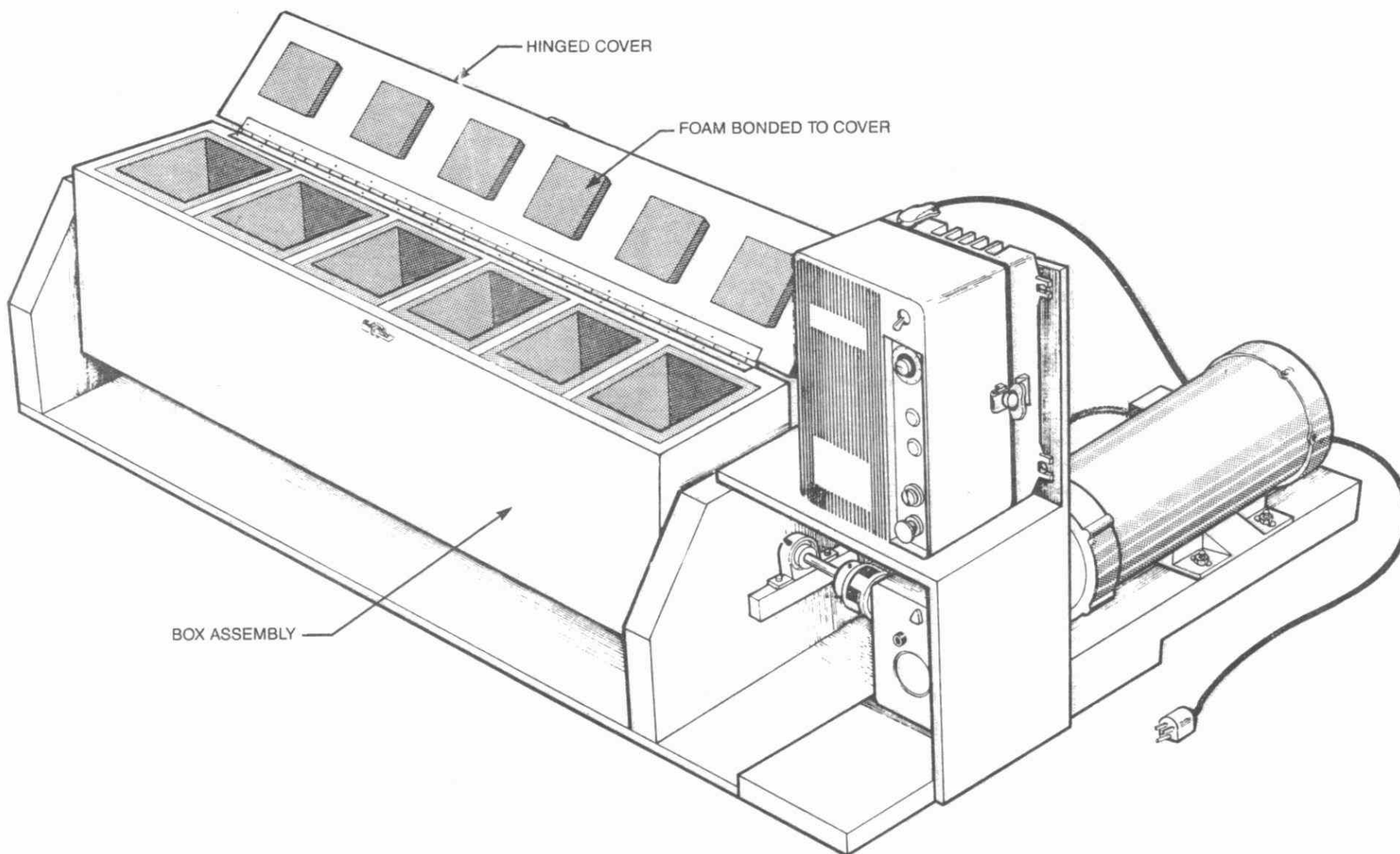
- 5.14 Analyze the combined solutions from Step 5.13 for contaminants listed in Schedule 4, that are likely to be present.
- 5.15 Report concentrations of contaminants in the combined leachate and the free liquid solution as mg/L.
- 5.16 Carry a blank sample through the entire procedure, using dilute acetic acid at pH  $5.0 \pm 0.2$ .

#### 6.0 Structural Integrity Procedure

This procedure may be required prior to extraction for some samples as indicated in Step 5.1. It may be omitted for wastes with known high structural integrity.

##### Procedure

- 6.1 Fill the sample holder with the material to be tested. If the sample of the waste is a large monolithic block, cut a portion from the block measuring 3.3 cm in diameter by 7.1 cm in length. For a treated waste (e.g. solidified waste) samples may be cast in a form with the above dimensions for the purposes of conducting this test. In such cases, the waste should be allowed to cure for 30 days prior to further testing.
- 6.2 Place the sample holder in the structural integrity tester, then raise the hammer to its maximum height and allow it to fall. Repeat this procedure 14 times.
- 6.3 Remove the material from the sample holder, and proceed to Step 5.2. If the sample has not disintegrated, it may be sectioned; alternatively use the entire sample (after weighing) and a sufficiently large bottle as the extraction vessel. The volume of reagent water to be initially added is 16 mL/g of dry sample weight. The maximum amount of 0.5N acetic acid to be added is 4 mL/g of dry sample weight. The final volume of the leachate should be 20 mL/g of dry sample weight.



LEACHATE 6

FIGURE 1  
SOLID WASTE ROTARY EXTRACTOR

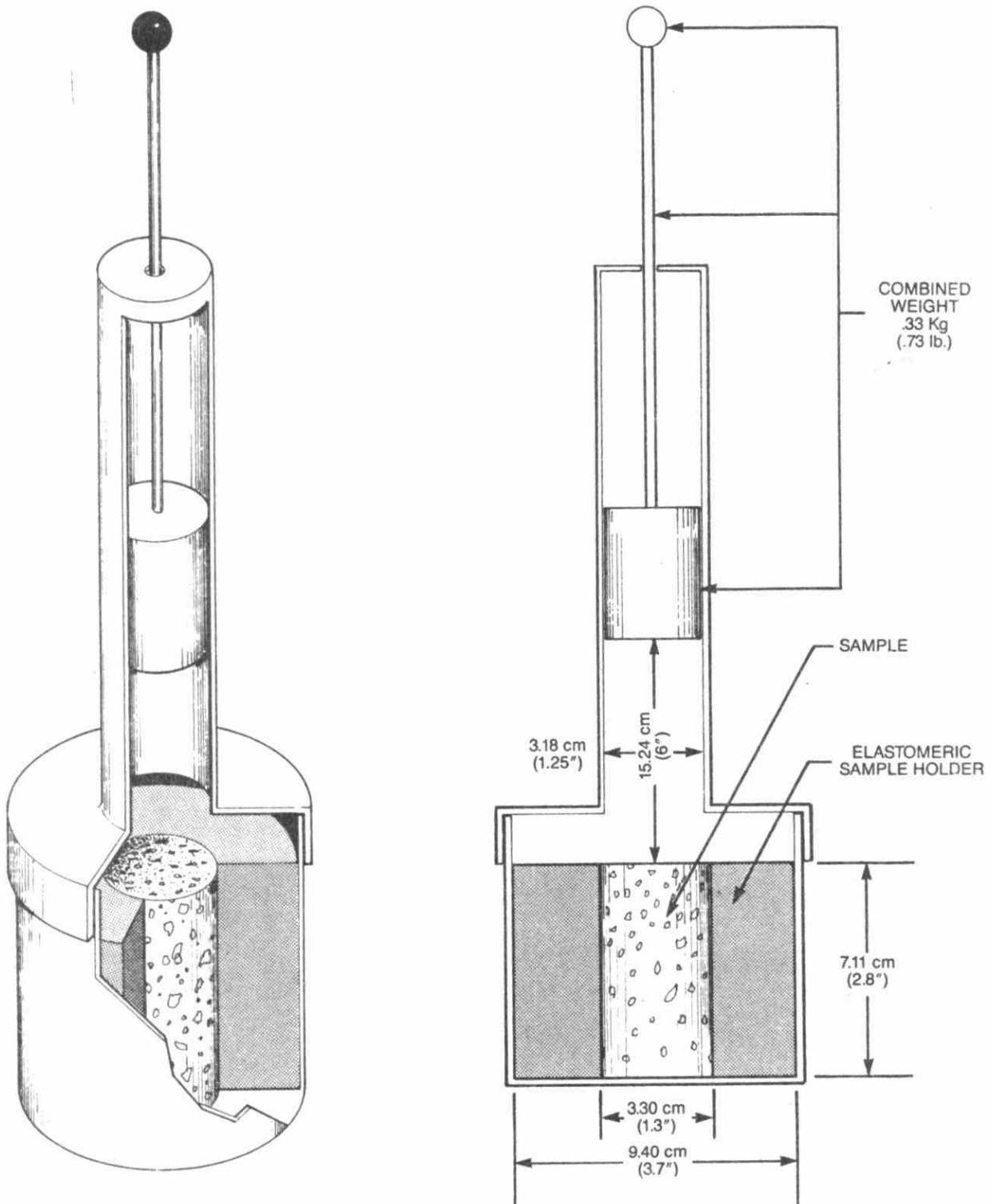


FIGURE 2  
STRUCTURAL INTEGRITY TESTER



TEST METHOD FOR  
THE DETERMINATION OF "LIQUID WASTE"  
(SLUMP TEST\*)

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1) Sampling

Obtain a representative sample of the waste to be tested.

2) Equipment

2.1 Mould - the representative waste sample shall be formed in a mould, in the form of the frustum of a cone with the base 200 mm in diameter, the top 100 mm in diameter, and the height 300 mm. The base and the top shall be open and parallel to each other and at right angles to the axis of the cone. The mould shall be made of a metal that is chemically resistant to the wastes to be tested and that has a thickness that is at least 1.5 mm. It shall be provided with foot pieces and handles as shown in Figure 3.

2.2 Tamping Rod - the rod shall be round, straight, and steel with a diameter of 16 mm and a length of 600 mm. One end shall be rounded to a hemispherical tip with a diameter of 16 mm.

3) Procedure

3.1 Dampen the mould and place it on a flat moist, non-absorbent (rigid) surface. Hold the mould firmly in place during filling by standing on the two foot pieces. From the sample of the material obtained, immediately fill the mould in three layers, each approximately one-third the volume of the mould.

Note: 1) The test must be carried out at a temperature of not less than 10°C.

2) One-third of the volume of the slump mould fills it to a depth of 70 mm. Two-thirds of the volume fills it to a depth of 160 mm.

3.2 Rod each layer with 25 strokes of the tamping rod. Uniformly distribute the strokes over the cross-section of each layer. For the bottom layer this will necessitate inclining the rod slightly and making approximately half of the strokes near the perimeter, and then progressing with vertical strokes spirally toward the center. Rod layers throughout their depth. For the second layer and the top layer, the strokes must just penetrate into the underlying layers.

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\* The method is based on the Canadian Standards Association test method for determining the slump of concrete (A23.2-5C).

## SLUMP

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- 3.3 When filling and rodding the top layer, heap the material above the mould before rodding is started. If the rodding operation results in subsidence of the material below the top edge of the mould, add additional material to maintain an excess of material above the top of the mould. After the top layer has been rodded, the excess material shall be screeded off to the level of the top of the mould. Remove the spilled material from the base of the mould.
- 3.4 Withdraw the mould immediately from the material by raising it carefully in a vertical direction. The operation of raising the mould shall be performed in approximately 5 seconds by a steady upward lift with no lateral or torsional motion. The entire operation from the start of the filling through removal of the mould shall be carried out without interruption and shall be completed within 2 minutes.
- 3.5 Determine the slump immediately after by measuring the difference between the height of the mould and the average height of the top surface of the material after subsidence.

Notes: 1) Waste samples that break or slump laterally give incorrect results. When this condition occurs the test shall be repeated with a new sample.

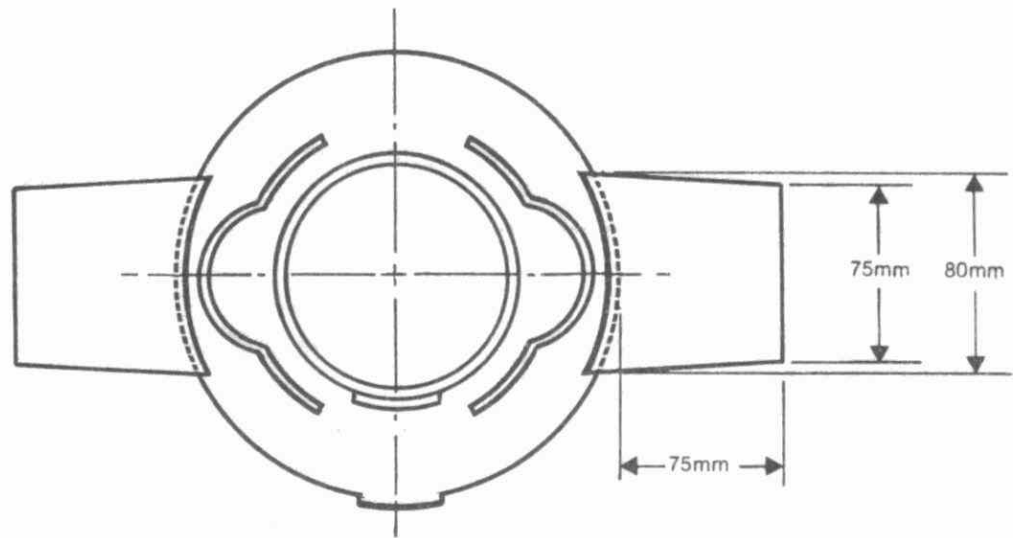
- 2) If two consecutive tests on a sample of material show a falling away or shearing off of a portion of the material from the mass of the specimen, the material probably lacks necessary plasticity and cohesiveness for the slump test to be applicable.
- 3) Duplicate tests on two different portions of the sample should not vary more than 10 mm.

4) Report

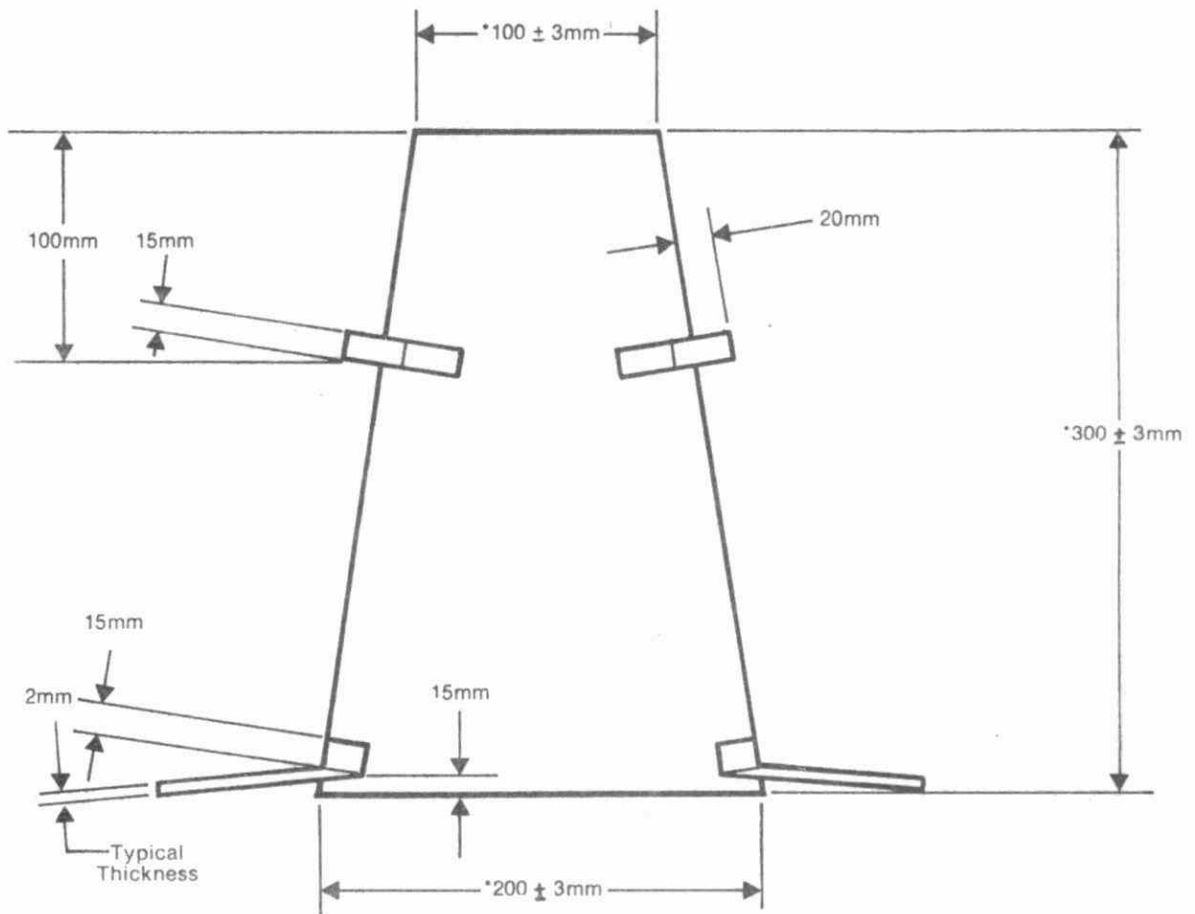
- 4.1 Record the slump in millimeters to the nearest 10 mm of subsidence of the sample during the test.

B. Breeze/gr  
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PLAN



SIDE VIEW

FIGURE 3  
MOULD FOR SLUMP TEST

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